Hospital Progress

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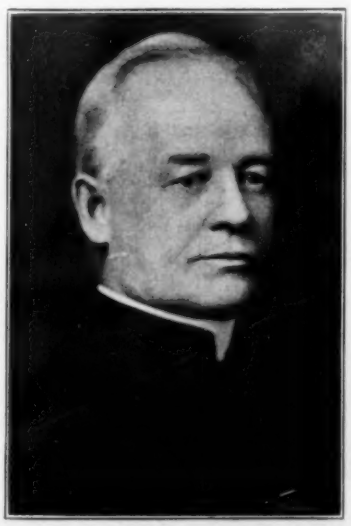
The Hospital Clinical Congress of North America

John R. Hughes, M.D., Dean of the College of Hospital Administration, Marquette University, Milwaukee, Wis.

THE Twelfth Annual Convention of the Catholic Hospital Association of the United States and Canada is held this year under a new title: "The Hospital Clinical Congress of North America." In that title is embodied the expression of a thought born in the mind of its author and originator, Rev. C. B. Moulinier, S.J., the honored president of this great organization. In that title is found the expression of a desire to make this convention of greater practical value to those who year after year by personal sacrifice and by great effort are constantly in attendance. In that title is found the idea of teaching, the idea of educating more extensively, the idea of extending a helping hand to those who for years have made Catholic Hospital Association conventions the success that they have been. Though it is well and generally known that these yearly pilgrimages in quest of better and fuller knowledge have been constantly increasing in their value and have been events which many have looked forward to as golden opportunities for advancement, this congress will perhaps surpass any of the former efforts.

In it the method of practical demonstration and practical teaching in each department of the hospital is accentuated. The methods of former years are for the most part replaced. The separation of the theoretical from the practical has been abandoned, and an actual working hospital, as complete as it is possible to secure, will be shown. The accomplishment of this task has been fraught with many difficulties—difficulties which at first sight appeared to the many interested workers in the attempt, to be insurmountable. However, it is now nearing completion, and the equipping of the various sections is advancing rapidly. The program, which is made up of approximately 90 per cent clinical demonstrations and round-table conferences, is nearly completed. This program contains names of persons of outstanding achievement in all of their varied specialties, men and women from many notable medical and educational centers and from many prominent hospitals of the country.

Clinical demonstrations are to be conducted daily for the full period of the congress, in all departments, from mechanical accessories, laundry, and kitchen in the basement, to the major surgery in the main auditorium. Each of these clinics is to be followed by one hour of round-table conferences, in which the delegates



REV. C. B MOULINIER, S. J.,
President of the Catholic Hospital Association, and Regent of the College of Hospital Administration, Marquette University, Milwaukee, Wis.

SISTER M. BERNADETTE, O. S. F.,
Superintendent, Marquette University Hospital, Milwaukee, Wis., Secretary-Treasurer, Catholic Hospital Assn.

JOHN R. HUGHES, M.D.,
Dean of the College of Hospital Administration, Marquette University, Milwaukee, Wis.

will be encouraged to participate. By this method it is hoped that this congress will afford opportunity for the general exchange of facts and ideas never before attempted in hospital conventions on a national scale.

Because of the fact that the educational effort is being stressed so extensively, the officers of the Catholic Hospital Association believed that participation and co-operation on the part of Marquette University with its great organized force of educators, with its College of Hospital Administration, its hospital, its dispensaries, and its medical school, would greatly add to the chances of success for the congress, the invitation to so participate was extended and accepted. It is for that reason, therefore, that the convention is held under the joint auspices of these two institutions. With the same thought in mind, all of the organizations of hospital, medical, and nursing professions were invited to participate. With these allied forces combining their powers and work toward a common goal, the success of this convention seems assured.

The workers in it have a great task to perform, a great duty to fulfill. It is their wish and hope that the accomplishment will in some measure repay them, and in some measure reward the faithful members of the Association for their constancy of the past. It is their hope that those in attendance at this congress will find it the greatest of all Catholic Hospital Association conventions, and as a result of it will return to their labors so fortified in scientific knowledge and so broadened in viewpoint that the primary and fundamental purpose for which we all are working may be achieved. After all, the purpose of all education, and particularly hospital and medical education, has for its primary object betterment and increase of efficiency in service to mankind.

Milwaukee (The Convention City) June 20—24, 1927

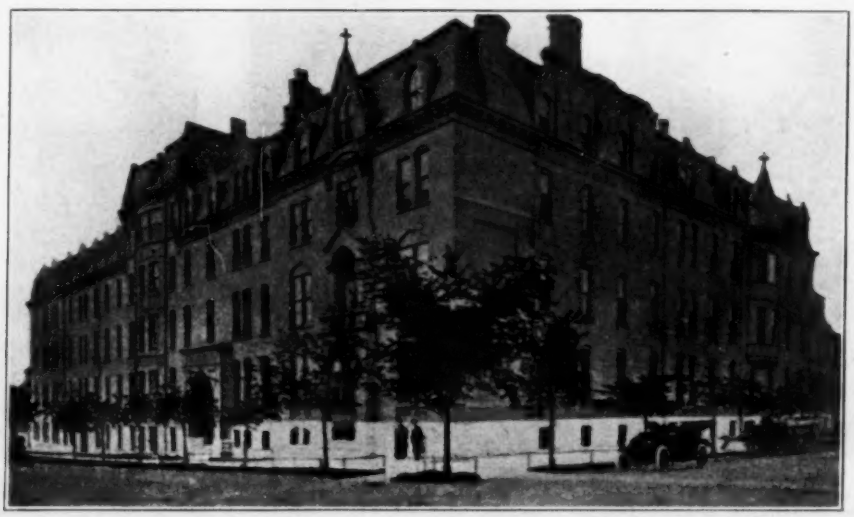
George A. Dundon, Secretary to the President of the Catholic Hospital Association

MILWAUKEE, the metropolis of Wisconsin, is a city of nearly 600,000 population, located on the west bank of Lake Michigan, about 85 miles north of Chicago. The city, formerly an Indian trading post, was incorporated in 1846. The name Milwaukee, Mahnawau-kie, means "good lands."

An important port of the Great Lakes, the city is noted for its diversity of industry. Among the leading products of the city are: Heavy machinery, electrical equipment, steam and water turbines, motors, leather goods, shoes, soap, candy, and silk hosiery. A large number of up-to-date wholesale and jobbing houses are located in Milwaukee. Its retail stores are modern and well equipped.

The city has a number of beautiful parks and other attractions for the visitor. Chief among these are the Washington Park zoological gardens and the Mitchell Park botanical gardens. The zoo is the fifth largest of its kind in the country and has more than 1,000 animals, birds, and reptiles on exhibit. A museum, the largest one municipally owned in the country, contains thousands of valuable curios. Well maintained golf links, both public and private, may be found in the city. A public tourist camp on the bank of Lake Michigan, is controlled by the city.

The Hospital Clinical Congress of North America will be completely housed in The Milwaukee Auditorium, which occupies the entire city block bounded by Fifth, Sixth, Cedar, and State streets. The building is municipally owned. It has eight halls that have a total seating capacity of 15,000 persons. Exhibition space of more than 95,000 square feet is available at the Auditorium.



ST. JOSEPH'S HOSPITAL, FOURTH AND RESERVOIR STREETS, MILWAUKEE, WIS.

SCHOOLS AND COLLEGES OF MARQUETTE UNIVERSITY, MILWAUKEE, WIS.

The Catholic hospitals and sanitariums in Milwaukee are: St. Joseph, 699 Fourth St.; Misericordia, 2224 West Juneau Ave.; St. Camillus (for men), 609 Twenty-first Ave.; St. Mary's, 448 Lake Drive; Sacred Heart Sanitarium, 575 Layton Boulevard; and the Marquette University Hospital. Other hospitals are: The Evangelical Deaconess, Nineteenth St. and Wisconsin Ave.; Mt. Sinai, 246 Twelfth St.; Columbia, 929 Maryland Ave.; Milwaukee Hospital, 2200 Cedar St.; besides several other county and private institutions.

Marquette University

Marquette University's history dates back to 1855, when the first attempt was made to establish a Catholic institution of higher education in Milwaukee. Until 1906 its history is the history of Marquette College. In 1907 a new charter was obtained and the name changed to Marquette University. Its growth has been rapid, and the development of the scope of its teaching has given proof of the desire and ambition of the faculty and board of regents to make the work of the university

as effective and far reaching as their resources will allow.

In addition to the College of Hospital Administration the University includes the College of Liberal Arts, The Graduate School, the Robert A. Johnston College of Business Administration, the College of Journalism, the School of Law, the School of Dentistry, the College of Applied Science and Engineering, the School of Medicine, the School of Nursing, the College of Music, the School of Speech and the University High School. The enrollment is about 5,000.

The College of Hospital Administration is a school for the training of hospital executives, hospital technicians, dietitians, and other hospital specialists. The step in 1924 was part of a comprehensive plan on the part of Marquette University to develop a great medical and hospital center in Milwaukee.

The movement of hospital standardization and improvement, so important and fruitful and to which the Catholic Hospital Association of the United States and Canada has given so much energy and effort, requires for its complete realization, the presence in each hospital of trained and expert executives, familiar with the best and most efficient method in hospital organization.

The need for trained hospital personnel was crystallized by the report of the committee on training hospital executives, financed by the Rockefeller Foundation, of which the Rev. C. B. Moulinier, S.J., president of the Catholic Hospital Association, and founder of the College of Hospital Administration, was a member. The matter of establishing a college of hospital administration to train hospital personnel was pressed upon Marquette University by the Executive Board of the Catholic Hospital Association, and the courses established as a result of this request are in accord with the general program outlined by the committee on training hospital executives.

The national headquarters of the Catholic Hospital Association is located on the grounds of Marquette University. This relationship offers the College of Hospital Administration an opportunity to keep in touch with current hospital practices and the needs of the hospital field, and offers a means for securing opportunities for hospital administration, internship, and practical training.

To signalize the establishment of the College of Hospital Administration, Marquette University gave the honorary degree of Doctor of Science to three distinguished persons in the field of hospital administration: Dr. S. S. Goldwater of the Mt. Sinai Hospital, New York City, whose services are known nationally and even internationally; Dr. Malcolm T. MacEachern, Director of Hospital Activities of the American College of Surgeons, whose influence reaches all hospitals, and Mother Mary Concordia, whose service is typical of the great services of the Catholic Sisterhoods. This is the first time the degree has been given for distinguished service in the field of hospital administration.

REV. A. C. FOX, S.J., LL.D.,
President of Marquette University, Milwaukee, Wis.,
Vice-President and General Chairman of Committees
of the Catholic Hospital Association.

REV. ALBERT C. FOX, S.J.
President, Marquette University, Milwaukee, Wis.

Rev. Albert C. Fox, S.J., M.A., LL.D., president of Marquette University, Milwaukee, Wisconsin, since 1922; former president of Campion College, Prairie du Chien, Wisconsin, and vice-president of St. Xavier's College, Cincinnati, Ohio; chairman of the Committee on Hospital Administration. Father Fox is one of the foremost Catholic educators in America. He was president of the Department of Colleges and Secondary Schools of the Catholic Educational Association from 1918 to 1923; Chairman of the Commission on Standards of the Catholic Educational Association from 1922 to 1925, and since 1922 has been a member of the Executive Committee of the same Association. He has also been a member of the Committee on College Standards of the American Council on Education since 1922 and a member of the Executive Committee in the Department of Education of the National Catholic Welfare Council from 1918 to date. He was the first university president in America to carry into effect the two-three-year plan in dentistry advocated by the Carnegie Foundation, and with Rev. C. B. Moulinier, S.J., LL.D., president of the Catholic Hospital Association of the United States and Canada, founded the first and, up to this time, the only active College of Hospital Administration in the United States.

Problems of Hospital Finance

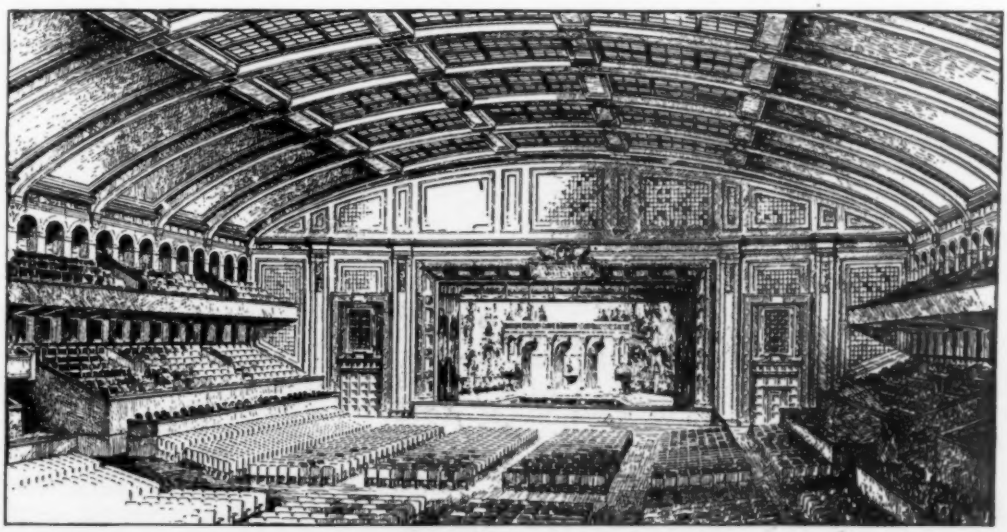
M. R. Kneifl, B.S., Lecturer in Business Administration and Accounting, Marquette University

In order to realize one's objective in hospital finance, it is necessary that a correct approach be made to it. This approach, when analyzed, may be expressed in what "profit enterprises" regard as plans. These plans involve the consideration of every element entering into the project. The elements are carefully set up, individually and relatively, reflecting insofar as administration is concerned, insofar as the financial consideration involved, the correct correlations. Without these it is veritably impossible to achieve the successful execution of any project. We have ample proof of this fact when we consider the record of bankruptcies shown in the files of our foremost credit agencies. They bespeak the lack of consideration accorded some one of the determining factors in their individual type of business.

As in profit organizations, so also in hospitals, for the reason that if the hospital executive does not take the time to draw up, set forth, analyze, correlate, and finally carry out his logical conclusions, he will meet with the same degree of success as the experiences of credit investigators indicate. Insofar as organization is concerned, there are in the files of our hospital magazines, in the books written on the subject, in the various contributing-association-library agencies, volumes of information which set forth under any given set of conditions reliable plans. As for the correlation of the various elements of the hospital by the executive, in their particular effect on the financial factor, there should be some considerations injected into the picture which hitherto have not been given the space and attention which they merit. Such topics as purchasing, storing, credit investigations, accounting for free work, poor administration of one phase or another, medical and surgical service units, might be given the cold-matter-of-fact, dollars-and-cents analysis for the sole purpose of arriving at a statement of operation, a statement of condition, a daily report of some significance, which will aid directly the management in its efforts to render better service. Results, finally, are the object in any venture. In order to attain them, in the matter of finance of a hospital, we must take into consideration the business character of these matters, regardless of their hospital connection. There is some responsibility resting on the executive from this point of view. He is called upon to utilize to the greatest extent the funds at his disposition.

Poor administration in one phase or another will tend not only to produce smaller results; it will tend to diminish the potential service his institution could render; and will be sufficient cause for a charge of gross negligence on the part of such responsible executive. This, in itself, should be sufficient incentive to the individual to endeavor to acquaint himself with some of the control features exemplified in profit enterprises. The use of these control features produces the financial results desired or expected. It will then be possible to explain clearly why there is a deficit, whether or not that deficit was expected. It will be possible to analyze that deficit in terms of some of the following factors: Whether it arises from the free work which the institution is alleged to have done, whether a part of it represents loss resulting from bad debts, whether poor administration in one phase or another, or waste might account for it. This analysis of the deficit seems to be the only natural, logical, and intelligent step.

In profit organizations there is an annual profit and loss summary which may or may not correspond to the expectations of the owners or the past history of the



INTERIOR VIEW OF MILWAUKEE AUDITORIUM ARENA ILLUSTRATING AMPHITHEATER ARRANGEMENT. MAIN FLOOR SEATS AND STAGE SETTINGS TO BE REMOVED FOR THE HOSPITAL CLINICAL CONGRESS OF NORTH AMERICA.

business. Whatever variation there may be in that profit and loss statement, there is a means by which these owners determine where this variation took place. They can, by the application of certain principles of procedure, determine exactly where this difference arises, and in most instances can give the reasons for it. We can see no reason why a similar analysis cannot be applied to the problem of hospital finance, and bring it under the same interpretation and the same set of principles which govern for profit institutions.

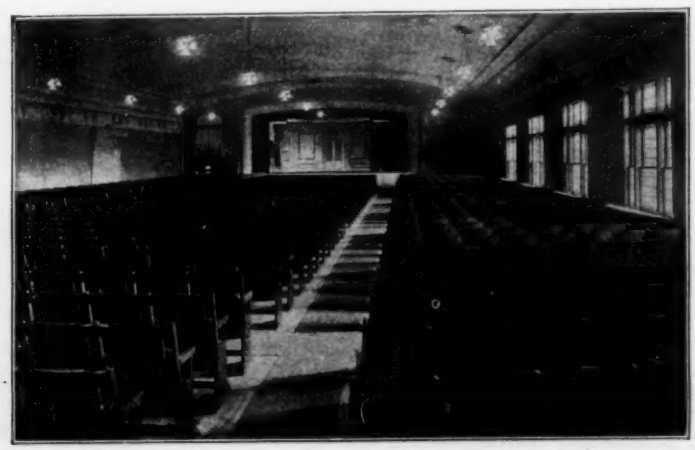
A means of invaluable assistance to the management is the budget estimate. It affords the executive personnel of the institution the opportunity to apply a rather cold analysis to the operating requirements of the individual service units and the institution as a whole. It affords the further opportunity of estimating on a reasonably sound basis, what income might be expected. This has generated, as a direct result, a keener interest on the part of a department executive in the financial operation of his unit. It gives the executive director more than sufficient opportunity to realize the cost of rendering this service. It will promote further ways and means of exercising the administration of the various departments of the institution on a sounder financial base.

These are some of the instances that occur daily in the life of a superintendent of a hospital. Some have been met and solved successfully. Others have realized only a small degree of success. In the forthcoming Hospital Clinical Congress the topics suggested above will be discussed in their fullest and widest interpretation and application. Every opportunity will be given for bringing to mind the fundamental financial structure of a hospital, carrying it out logically through all of its operations, reflecting as a result, a clear analysis of the financial consideration involved. This is what constitutes the type of information which aids the superintendent in successfully carrying on his work. There have been, at some time in the life of nearly every hospital, these problems—all of them or some of them—and we believe that in the administration clinics which are to take place in connection with the congress, you will be afforded an unusual opportunity to hear, learn, see, and discuss, not alone the general principles on which such considerations rest, but your own particular problems in the peculiar conditions which may surround your case.

The Clinical Discussion of Hospital Construction

M. A. Higgins, M.A., Lecturer on Architecture, School of Hospital Administration, Marquette University

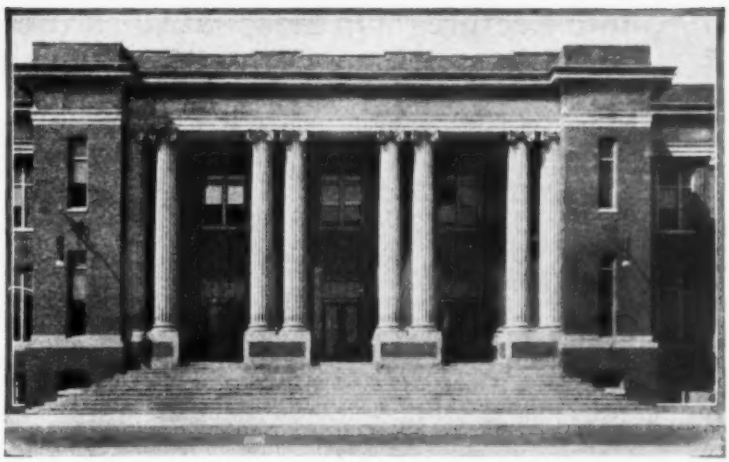
THE Hospital Clinical Congress at the Milwaukee Auditorium, June 20-24 will present an unique opportunity for the clinical and round-table discussion of hospital-constructional problems. The presence on the floor of the convention of numerous exhibits of building materials, hospital plans and photographs, and diagrammatic charts will assist to a concrete expression of these problems. A generous share of time will be allotted to architects, engineers, and hospital consultants, who will discuss the latest advances of their respective fields in the continuous effort of improving the physical plant of the hospital. In addition, many of the national industrial and manufacturing groups will be represented in these discussions by the heads of their engineering and research divisions who will present the findings of their bureaus in a noncommercial aspect, thus supplementing the usual professional papers with valuable material from a hitherto silent field. In certain cases there will be cooperative clinics and demonstrations by groups of manufacturers and equipment firms presenting a balanced and well-rounded study of the actual operation results and problems in specific departments such as the laundry, the kitchen and diet services, X-ray and physical therapy, laboratory services, etc. The physical layout of the auditorium and the intimate relation between the demonstration or clinic groups and the related commercial exhibits will make for better results in both divisions, indeed it is doubtful if any previous hospital or medical convention has so stressed the physical equipment. The recent sectional and regional conferences throughout the United States and Canada, which have been in most cases the joint effort of the Catholic Hospital Association and the American College of Surgeons, have clearly indicated the superior value and interest of this method over the older professional paper and discussion routine. The very presence of the physical apparatus and layout which is the working media of hos-



PLANKINTON HALL, AUDITORIUM, MILWAUKEE, WIS.

pital and medical science is a powerful aid to a comprehensive and easily retained grasp of the principles and theories discussed.

While the program and exhibit list of the Hospital Clinical Congress is not yet complete, indications in every department are for the largest and most interesting convention in the history of the Catholic Hospital Association. Being the joint effort of the Association and the College of Hospital Administration, it at once affords a wider perspective than the usual Association meeting in which the educational and research aspect is primarily not of the first importance. The rapidly growing movement for improved facilities in the training of hospital executives and for the development of a true hospital executive and administerial profession gives a peculiar significance to this congress, the first of its kind. The construction problems and the problems of equipment present to the hospital executive a very wide and difficult field, in which there are now and will be for a long time many unsolved issues. The vast improvement in American hospitals due to the minimum-standard activities of the American College of Surgeons indicates a parallel field of opportunity and study in the improvement of the physical plant behind hospital procedure and technic and we may look for the development of recommended codes of construction and equipment as well as for recommended procedures in construction and service. Such codes and recommendations are inevitable if the entire field of hospital activity is to be properly studied and balanced. There is room for extended research and even for the foundation of endowed fellowships in the problems of hospital architecture, hospital engineering, and hospital equipment. The Hospital Clinical Congress may present discussions and suggestions leading ultimately to these fundamental and necessary investigations.



THE FIFTH STREET FACADE, AUDITORIUM, MILWAUKEE, WIS.

We may well recognize at this point the important and valuable contributions of the various special committees on construction and building problems inaugurated by the American Medical Association and the American Hospital Association, which have already contributed well-studied and interesting reports to their associations. The Catholic Hospital Association in conjunction with the College of Hospital Administration will have an opportunity in the present Hospital Clinical Congress and the following meetings to consider in an intimate way the formation of similar investigative groups and thus contribute its share to the general improvement of hospital architecture and engineering.

MISERICORDIA HOSPITAL, 2224 WEST JUNEAU AVENUE, MILWAUKEE, WIS.

"Clinic Lectures" On Hospital Construction, College of Hospital Administration, Marquette University, Milwaukee, Wis.

THE College of Hospital Administration of Marquette University is supplementing its regular professorial lecture course in hospital architecture with a series of extramural lectures by research engineers of various corporations and industries supplying the hospital field. These lectures take the form of "clinics" on the problems of hospital construction and equipment following the type of instruction and conference now being used in the various regional and sectional meetings of the Catholic Hospital Association and the American College of Surgeons. In addition to the professional papers presented, these engineer representatives illustrate the problems with samples of materials and equipment and also with slides and moving pictures. It is planned gradually to extend the number and variety of these lectures until the entire range of hospital construction and equipment is well covered from the manufacturer's standpoint.

The development of research and service engineering is one of the most important advances of American industry and manufacturing of recent decades. By means of these research and service departments the manufacturer not only improves his own product and processes but assists the buyer to a more intelligent and successful use of it, cooperating with the prospective customer in the original planning, assisting him in the installation, and continuing this service in many cases even through the life of the machine or product. Research departments and service engineering branches are constantly becoming larger and more numerous and are taking an authoritative position in the sales effort. Realizing the special information and viewpoints gained by these intensive researches, many of the great universities of the United States, such as Marquette, are making use of the engineering and scientific departments of extramural papers by such research and service engineers. These tend to round out and make much more practical the ordinary theoretical discussions of the classroom because they bring the student into direct contact with the difficulties of actual practice. The following is a list of lectures already given or now under schedule for the present hospital class at Marquette University:

"The Application of Color in the Hospital," by M. Rea Paul, National Lead Company, New York.

"The Uses of Cork in Hospitals Including Insulation, Soundproofing, and Pipe Covering," by S. C. Martin, Engineer, Armstrong Cork and Linoleum Company, Pittsburgh.

"The Application of Tiles and Mosaics in Hospital Architecture," by Joseph D'Eath of the Associated Tile Manufacturers, Beaver Falls, Pa.

"Hospital Problems in Fire Protection," by Mr. Goldsmith, Chief Engineer, National Board of Fire Underwriters, Chicago.

"Problems of the Hospital Laundry," by Taylor Stanley, American Laundry Machinery Co., Cincinnati, Ohio.

"Hospital Refrigeration Practice," by Harry Sloan, M. E. Vilter Manufacturing Co., Refrigeration Engineers, Milwaukee, Wis.

"Special Problems in Hospital Heating," by Engineers' Department, Johnson Service Company, Milwaukee, Wis.

"Electric Lighting in the Hospital," by W. H. Rademacher, Lighting Practice Section, Edison Lamp works of the General Electric Company, Harrison, New Jersey.

"Hospital Elevator Practice," by the Service Division of the Otis Elevator Company, New York.

"Hospital Planning in Relation to Equipment,"—four lectures—by J. F. Gregoire, Special Representative, Kny-Scheerer Corporation of America, New York.

ST. MARY'S HOSPITAL, 448 LAKE DRIVE, MILWAUKEE, WIS.

The Hospital Laundry[1]

M. A. Higgins, M.A., and Taylor Stanley, Engineer

THE Hospital Laundry is essential to the efficient, economical and uninterrupted operation of the hospital itself. It is an important factor in the creation and maintenance of the technic and morale in the hospital, for which the assured presence of an adequate supply of clean linens and bedding is absolutely necessary. The heavy initial and operating costs, moreover, make the problem of the laundry a most important one in hospital economics. It is probably the consensus of opinion among hospital executives that a well-equipped and properly operated laundry in or near the hospital and directly under the hospital ownership and management is much superior to any method of contract service, all other things being equal.

The success of the hospital laundry depends upon the following factors:

1. Correct planning of the laundry, building or room and its equipment to meet the function.
2. Efficient and reliable machinery.
3. Scientific management and procedure.
4. Properly selected and well paid personnel.
5. Rigid inspection and maintenance of machinery.

The laundry building, or the laundry unit in the hospital building, depends in its plan upon the process of operation from collection and delivery of the laundry to reissue to the various wards of the hospital. Additional work affecting the laundry layout is sterilization of infected linens, repair of damaged linens, and the salvage of worn-out linens and materials plus the hospital laundry office which should be a center of record for all these operations. The location should be, preferably, away from patient buildings, in or near to the powerhouse for ample steam and hot water. A second-floor room in the powerhouse is an excellent location providing the proper care is taken for light and ventilation.

The plan of the laundry room and the arrangement of the machinery and compartments should be in a progressive order following the functions to prevent any closing or return of the flow of work from start to finish. Provision should be made for easy future expansion of the room and for the extension of all machinery lines, electric supply, steam supply, and drainage, without interruption to the current laundry service. The room itself should be higher than the average hospital room, not less than twelve feet and exceptionally well lighted and well ventilated to secure even illumination without glare and to guarantee a room temperature under operation of not over seventy-five degrees during the hottest months of summer. Laundry machinery naturally gives off a great deal of heat which must be allowed for in the ventilation layout. The latest types of machines are developed with hoods and exhaust ducts carrying off all local heat before it enters the room. The ventilating system should provide from ten to twelve complete air changes per hour, this to be secured by thermal circulation or exhaust fans. The steel-sash type of window with hinged units is found to be excellent for graduated ventilation and improved lighting. The floors should be of hardened concrete or tile with particular attention to ample drainage under and around the washers and extractors. A frequent mistake is an insufficient system of drainage at these points resulting in standing pools of water in various parts of the laundry room with consequent disorder and danger to health and general bad effect upon the laundry operation. Side walls should be cemented or tiled to a height of 4′6″ or 5′ and above this point finished in cement wall plaster, enameled in white or ivory. Every effort should be made in the construction and finish to permit a laundry that will be easily kept light, dry, clean, and cool, for these conditions seriously affect the efficiency of the laundry personnel and consequently laundry costs.

The laundry plan naturally divides itself into the following divisions:

1. Receiving or sorting room.
2. Washing and drying room or section.
3. Flat-work ironing. Prim and hand pressing.
4. Resorting and reissuing room.
5. Laundry repair and salvage room.
6. Office and record room.
7. Sterilization section—
   - A. Entry and sterilizer feed end.
   - B. Discharge end connected to sorting room, for passage through laundry proper.

The respective proportions of the total laundry area occupied by each of the above divisions will, of course, vary with the individual hospital and its bed capacity, also influenced by the particular class or classes of patients treated. Based upon an investigation of the machinery requirements of more than one hundred general hospitals for acute diseases handling surgical and medical cases, the following lists of equipment are considered a fair average for general hospitals of fifty, one hundred, two hundred, three hundred, four hundred, and five hundred beds, respectively. These lists contemplate the usual amount of laundry service for the general hospital of this size and class of patients, and for operation of the laundry from forty-eight to fifty hours per week:

No. 1. For the 50-bed hospital, a laundry unit 20′x52′ with the following equipment:

1 32″ x 54″ solid head washer
1 26″ extractor
1 Junior dry tumbler
1 100″ flat work ironer
1 36″ x 54″ sterilizing washer
1 Universal press, single type
2 Tilting-type ironing boards
1 25-gal. starch cooker.

No. 2. For the 100-bed hospital, a laundry unit 34′x42′, with the following equipment:

1 Sterilizing washer
1 36″ x 54″ solid-head metallic washer
1 28″ x 33″ solid-head metallic washer

[1]This paper is the result of collaboration between Mr. M. A. Higgins and Mr. Taylor Stanley and follows upon two lectures on the subject of laundry practice in the hospital given at Marquette University and accompanied by two sets of moving pictures depicting the latest types of laundry practice.

1 Starch cooker
1 30″ x 48″ x 84″ disinfector
1 30″ x 42″ junior drying tumbler
1 100″ return-apron flat-work ironer
2 Presses.
1 Ironing board

No. 3. For the 200-bed hospital, a laundry unit 42′x45′, with the following equipment:

1 Sterilizing washer
1 Disinfector
1 42″ x 64″ monel-metal cascade-type washer
1 36″ x 33″ solid-head metallic washer
2 30″ extractors
1 100″ 4-roll extra flat-work ironer
4 Presses
2 Ironing boards
1 40″ x 44″ drying tumbler

No. 4. For the 300-bed hospital, a laundry unit 46′x52′, with the following equipment:

1 42″ x 48″ x 96″ disinfector
1 Sterilizing washer
2 42″ x 64″ monel-metal cascade-type washers
1 30″ x 33″ solid-head metallic washer
1 Starch cooker
1 40″ overdriven extractor
1 30″ underdriven extractor
1 110″ 6-roll flat-work ironer
6 Presses
3 Ironing boards
1 40″ x64″ drying tumbler

No. 5. For the 400-bed hospital, a laundry unit 50′x60′, with the following equipment:

1 48″ x 60″ x 96″ rectangular disinfector
1 Sterilizing washer
2 42″ x 72″ monel-metal cascade-type washers
1 36″ x 33″ solid-head metallic washers
1 48″ overdriven extractor
1 30″ underdriven extractor
1 Starch cooker
1 120″ 6-roll flat-work ironer
8 Presses
1 40″ x 64″ drying tumbler

No. 6. For the 500-bed hospital, a laundry unit 50′x64′, with the following equipment:

1 48″ x 60″ x 96″ rectangular-type sterilizer
2 42″ x 84″ cascade-type washers
1 36″ x 54″ sterilizer washer
1 36″ x 33″ solid-head washer
1 120″ 8-roll flat-work ironer
1 30″ underdriven extractor
1 48″ extractor
1 50-gal. starch cooker
1 40″ x 94″ rotary dry tumbler
4 Presses
4 Tilting-type ironing boards

NOTE: The equipment list and plan for the 500-bed hospital will require especial check against the patient list and the particular requirements of the institution considered.

In our floor plan, we have shown the sterilizing washer, as we wish to be conservative. In many cases hospital superintendents have discouraged the use of sterilizing washers, as they felt sufficient sterilization could be secured from the standard monel-metal solid-head cascade-type of washing machines. In the areas and lists of equipment above given we have endeavored to recommend a minimum amount of machinery necessary; in other words, these are the bare requirements for hospitals of these sizes to get along with. In our estimation, it would be impracticable to recommend less equipment than this for hospitals of the sizes designated. In many cases, it would be advisable to install larger and more elaborate equipment in order to handle the work in less time and to increase the efficiency of the operators of the laundry.

While considering the problem of laundry equipment, it may be well to mention the demonstrated advantages of individual motor-driven units which are now rapidly replacing the older belt-driven type. These advantages are: (1) Safety of operation; (2) saving of power and consequent reduction of cost; (3) cleanliness; (4) flexibility. Briefly discussing these in turn:

(1) The advantage of safety of operation, as compared with belt and line shafts. There is very little need to go into the matter of danger of movement connected with overhead line shafting and belts. This is an antiquated method which is being replaced very rapidly not only in laundries but in every industry in the country.

(2) The matter of saving in power consumption and reduction of cost from that source is frequently mentioned in engineering discussions. One of the leading publishers of engineering information in the country, estimated that from 25 to 30 per cent of the total power generated at the steam engine is lost by the time it reaches the machines to be driven, owing to line shafts, belts, and pulleys, with their attendant friction and slippage.

Electric power is directly applied to each individual machine, and the waste in transmission is negligible.

(3) There is no doubt at all as to the advantage of cleanliness to the individual electric-motor-driven machine. Line shafts and belts unless kept unusually clean will scatter dust and oil, whereas there is no danger from this from the individual electric-motor-driven machine.

(4) As regards the matter of flexibility, if it is desirable to operate only one or two machines, it is possible to do so with the individual electric-motor-driven equipment, without the necessity of operating any line of line shafting, pulleys, and belts to accomplish the purpose.

A new development in laundry machinery is the heating of laundry machinery by electricity. It is now possible to heat flat-work ironers, drying tumblers and presses by electricity instead of by high-pressure steam. Of course, this can be done advantageously only where a cheap rate on electric current is available. However, with the rapid strides being made in the public-utility industry and the subsequent reduction of price in electric current to the consumer, it will not be long before many localities will be able to purchase electric power very cheap. In certain parts of the country this is now possible.

Of course, it is desirable to have high-pressure steam in a hospital, if possible, owing to the necessity of using steam and hot water in the washing and sterilizing process, as well as for heating the ironing machines. Therefore, it is our recommendation to consider seriously the installation of high-pressure steam systems even in small hospitals.

We may quote here two very valuable paragraphs from the 1926 edition of the "Modern Hospital Year

Book," concerning the areas and costs of hospital laundries:

"From an analysis of the laundries recently installed in hospitals it is found that the average floor space required is about ten square feet per bed. This will vary with the character of the institution and the kind of equipment installed. The larger and more modern units of laundry equipment have a greater output per square foot occupied than either the older or smaller types of machines. It may be considered a safe practice, however, in the planning of the hospital laundry, to allow twelve square feet of floor space per bed. Ordinarily this will provide for reasonable expansion or the addition of one or two new units as increased demand may dictate.

"Our survey also shows that if a laundry for a 100-bed hospital is to be installed on the basis that the hospital will require ten pieces of laundry per bed per day, the cost may be roughly estimated at $85 per bed. This figure, however, does not include such accessories as marking machines, stencils, hampers, tables, jars, tanks, and similar items, the acquisition of which depends largely upon the personal convictions of the laundry manager or the character of the institution. Final installation cost will depend entirely upon local conditions, such as freight rates, character of driving machinery, location of laundry in the institution, and other varying factors. A safe estimate, for the small or medium-sized institution, will range from $100 to $125 per bed—a liberal and adequate estimate."

Considering now the operation costs of the laundry, we may cite here some actual recent examples:

No. 1. The Women's Hospital of Cleveland, Ohio, containing 112 beds, has installed a complete laundry department as follows:

1 36"x 54" metallic solid-head washer
1 26" motor-driven extractor
1 100" 2-roll return-apron flat-work ironer
1 No. 38 compound press
1 No. 51 compound press.
1 Ironing board

With this equipment they average 1,996 pieces of linen and wearing apparel per day. As there is no high-pressure steam available, they operate their flat-work ironer with electric heat. Their cost per month to operate the laundry department is as follows:

Employees' salaries	$365.00
Supplies	73.80
Electricity	68.00
Total production cost per month	506.80

or an average cost per working day of $19.50; this means that it costs them approximately 1c per piece for everything that goes through their laundry.

No. 2. In the maternity and children's hospital at Toledo, Ohio, the following machinery is installed:

1 32" x 54" solid-head washer, motor driven
1 22" x 33" solid-head washer
1 26" vertical motor-driven extractor
1 100" return-apron flat-work ironer, motor driven
1 30" x 42" drying tumbler, motor driven
2 Ironing boards
2 Presses

The hospital contains 75 beds. They effected a saving of $1,300 in one year through the use of their own laundry as compared with their previous method.

No. 3. Martins Ferry Hospital of Martins Ferry, Ohio, has 72 beds. We recently secured laundry cost from them, and I give you their figures per month:

Supplies	$ 50.00
Salaries (3 women, 44 hrs. per week)	162.00
Engineer (salary charged to laundry)	100.00
Gas to heat vert. boiler for laundry	41.00
Light and power	25.00
Water	1.00
Repairs	10.00
Total	$389.00

They handle approximately 1,350 pieces per day, so that their cost per piece is about $0.016. They have the following equipment installed:

1 32" x 54" solid-head metallic washer, belt-motor driven
1 26" extractor, motor driven
1 100" return-apron flat-work ironer
1 30" x 42" drying tumbler, belt-motor driven
2 Presses
1 Ironing board
1 Metallic truck tub
1 Folding table

No. 4. Riverside and St. Joseph's Hospital, Warren, Ohio, has 50 beds. Following are operating costs per month:

Supplies	$ 38.00
Salaries (4 women, 50 hours per week)	192.00
Water softener	2.00
Heat, light, and power	127.00
Water	18.00
Engineer's salary (charged to laundry)	75.00
Repairs	10.00
Total	$462.00

They handle about 1,100 pieces per day; cost about $0.019 per piece. Their list of equipment is as follows:

1 30" x 54" Globe-type wood washer, motor driven
1 20" motor-driven extractor
1 66" No. 1 Handy flat-work ironer
1 30" x 42" drying tumbler, motor driven
1 No. 38 compound press

It will be noted that the above examples cover hospitals from 50- to 112-bed capacity as it is in the smaller hospital that one meets the greatest variations in laundry costs. In hospitals of larger size, it is possible to cut the cost per piece considerably over the amounts mentioned above as the element of quantity production reduces unit cost.

The operation and maintenance of the hospital laundry requires constant vigilance if costs are to be kept at the proper minimum. The manager should be selected on his previous record in commercial- or hospital-laundry management, and paid a sufficient salary to guarantee competent supervision, accurate records, and efficient production. The laundry personnel should be gradually built up to a permanent organization of well-paid and skilled hospital-laundry workers, to eliminate labor turnover which is destructive to morale and economy. Sorting and marking are important operations at both ends of the laundry process to guarantee prompt and correct returns. Collection and redistribution should be at regular intervals by authorized personnel and through established centers. The laundry office should be a complete though small record center of

work and costs and should be regularly audited by the hospital superintendent, comparing records attained with other hospitals and also with local contract offers. This provides a needed stimulus and check upon the entire laundry personnel. Washing is perhaps the great technical problem of the laundry, involving the elements of time, labor, and scientific knowledge of chemistry. The hospital laboratory can assist the laundry with a regular check and analysis of washing waters, which influences largely the costs of soaps and bleaches. An extremely important matter in laundry operation is regular and rigid inspection of all machinery. This machinery is expensive, and is operating many times under heavy demand and adverse conditions so that unusual care should be given to cleaning, oiling, and adjustments. To insure this regular care of machinery and equipment the hospital superintendent should insist upon an "inspection report" monthly from the laundry manager and chief engineer. An "annual inspection" report by the manufacturer's service bureau would tend to eliminate abuses of the equipment in operation or failures in repair. We may refer here to two excellent articles on the planning, equipment, and operation of laundries in the 1926 and 1927 "Modern Hospital Year Books." These are well worth the careful scrutiny of any hospital superintendent.

In conclusion we may recommend the hospital executive to consult the service engineers of the larger laundry machinery corporations before planning any hospital laundry, or in attempting to solve particular problems of operation. These service organizations have had a wider and more intensive experience with the difficulties of laundry practice than any individual architect or engineer.

Hospital Planning in Relation to Equipment.—The Surgical Suite[1]

Joseph F. Gregoire

IT is with the thought that each one here will at some time or other be called upon to develop and plan a hospital that this paper has been prepared. It is taken for granted that the important preliminaries incident to planning a hospital have been taken care of exactingly.

You are then about to expend money, given by society for a suitable building where medical treatment may be administered. You will be entrusted with certain members of society who are temporarily entertaining disease or injury when this building is completed. Will you have the necessary vision to plan, equip, and cause to function this hospital? Will specialized training for one branch of the work so modify your vision that each of the other departments outside of your specialty will be limited in their usefulness? Is the picture of the hospital as a complex, detailed unit or whole firmly established in your mind as if you were looking down from a vantage point of clear vision rather than looking up from the narrow confines of a limited specialty?

Each hospital completed is said to be the last word in hospital planning and equipment by its originator. Many changes and alterations were made during the period of its construction. It is said to fill the need of the community exactly. However, viewed from the eyes of another, this last word is totally wrong and unfitted to serve as a hospital in any of its details. Regardless, this hospital will attain average results after a period of operation because it is possible with waste of time, labor, and money to adapt any building to a routine. Why not reverse this process and have the building measure up to a simple, economical, effective routine? It is easy to ask this question and to grant that such a program would be correct but how can this method be applied? Experiences in the past together with theory and a certain insight into the future, which may be gained by observing progress and altered methods in the teaching centers, present the only available material upon which certain standardization in hospitals may be attained. Why is standardization not wanted in some of the hospitals? Can it be that these hospitals have been developed to meet the demand of certain surgeons who have developed a special technic or a special routine? Will it be possible in twenty years to utilize a hospital so developed to meet the demand of the younger surgeon who, while not so ingenious in his method, has been educated to a more standard technic? Would it not be better to have provided a layout that would be quite flexible and adapt itself to any form of technic rather than to have the burden of one man's idea intensified to an extent that would preclude this flexibility? This standardization is not wanted in many instances although in reality it is the very life of the hospital of the future. Minimum standards exist in very definite form as regards the medical factors. Is it possible to develop standards of measurement of hospital values covering very many of the other existing factors? Possibly not in the immediate future. Eventually? Who can say, no?

There is nothing mysterious about any part of the whole big hospital. A marked tendency to conservatism is due rather to lack of complete understanding of the entire subject. Every time the subject is brought up and thought about or given publicity there are certain indefinite accomplishments which later will evolve into basic material upon which to build a system of hospital values. Many obstacles will appear as insurmountable. If the need is great enough these standards will develop regardless of opposition, and those most positive in their

[1]The first of four lectures by Mr. Gregoire in the "extramural" series of lectures of the College of Hospital Administration.

condemnation will usually be found to be the first to adopt the standards often without their knowing it.

An article appeared recently in a weekly magazine which presented the hospital problem to several million of lay readers. It was interesting to see such an article because the publisher paid good money for that article. He was confident that his readers would appreciate such an article. Several hundreds of thousands of dollars' worth of advertising was given hospitals in general through this article and the education of the layman as regards hospitals was made possible in a manner never before achieved by professional attempts in this direction. This mystery spoken of above and the fear in the minds of millions regarding hospitals is quite wrong. The lack of a proper form of expression regarding hospital subject matter is to be overcome. The hospital executive is the logical one to develop this means of expression. With clear understanding comes well-directed action.

Resolutions presented and adopted at the various hospital conventions show that much thought is being given to the development of measurements of hospital values. An attempt at such measurements by certain rule has been developed. It is as incomplete and subject to as much revision as the average rule in process of formulation. It is the crystallization into a new form of the old commonly used factors. It gives systematized order in a graphic way to stimulate greater minds to action.

A survey of the community which is one of the preliminary steps will guide the planner in a general way. Selection of location with due regard to accessibility and exposure has been thought of. Your good hospital architect has outlined a program of building which covers a period of the expected length of life of your hospital. The finances have been arranged to permit of the erection of a hospital building that is shown to be needed. Preliminary layouts are to be prepared for each department and later coordinated into a general preliminary plan with the help of this good hospital architect.

While the hospital architect is indeed concerned with the design and beauty of the elevation of the building, it is his first duty to give you an economically operable building to house the many diversified departments. He will take your mechanized layouts of departments and from them develop symmetry of design. He will not sacrifice workability for beauty, yet he will turn over a building that is quite pleasing and of a definite type. There will be correct sequence of interior arrangement even if at the expense of balance of the exterior, all of which his ingenuity as an architect will overcome. The expense in operation of a beautifully balanced hospital building often exceeds the original cost of the entire building when extended over a period of the expected length of life of the structure.

When you are in need of glasses, you consult a specialist. A true specialist has considered every phase of his subject and measures values by their net worth. He does not compromise. He is exact. So you in turn in preparing mechanized layouts for the various departments in your hospital will have to be guided by measurements of values that are exact. Each department will develop into an intensified layout centered about the work to be carried on in that department. Oftentimes these layouts assembled present an almost impossible mass of conflicting data which try the very soul of the architect. If certain definite rules of measurement were had in advance of the planning of each department, would it not simplify the architect's work of coordination?

SOME HOSPITAL MEASUREMENTS

The Concerned

The Factors Incident

The Result

Chart 400-699.

Some hospital measurements have been evolved and outlined in chart 400-699. These measurements cover "the concerned," "the factors incident," and "the result." Any department in the hospital can be measured by these three yard sticks.

Many hundreds of hands cause the hospital to function. The eyes and minds of each pair of these hands from the engine room to the animal pen on the roof feel that essentially his viewpoint is most important. Each contractor having to do with the building of the structure feels that his part of the work is the most important. The laboratorian rightly perhaps, feels that his department is the greatest in the hospital, while radiologist, dietitian, surgeon, physical therapist, and the host of others each feels that his department should have special consideration. With certain rulers to guide the hospital administrator or planner as outlined above, the relative values of each department are considered and precedence can be given without compromise.

THE CONCERNED

The Patient (Including the Unborn)

Assistants **Surgeon** **Anesthetist**

Intern **Sterile Nurse**

Medical Student **Science** **Student Nurse**

Relatives

Entire Hospital Personnel

Society

Chart 400.

In looking at chart 400, it is found that "the concerned" represent all of the people who in any way will have to do with the operation of the hospital when it is completed or who will receive treatment within its walls.

The patient, with a consideration for the unborn, is the first thought in measuring any department, any routine or any piece of apparatus that is to go into the hospital. The safety, comfort, and benefit to the patient is of first consequence. Everything else is merely incident to him. The biggest surgeon and all of science must bow down to the patient. Therefore, what is best for the patient is the first rule of guidance.

Inasmuch as the life of the patient is charged directly to the surgeon, the anesthetist, and the assistant surgeons who practice in this hospital, it is logical

to assume that these three of "the concerned" should have the next consideration. Certain rulings by the courts in one of the midwestern states makes the hospital responsible for the selection of its staff members and, therefore, there might be in some minds the thought that the hospital board would be next in consideration after the patient. However, many opinions are that the surgeon, anesthetist, and the surgeon's assistant are second in importance. Therefore, in planning the department, any measures taken to make the work of administering medical therapy to the patient easier or more effective is a second rule. The next on the chart is the sterile nurse who in turn depends upon her supervisor and her assistant nurses to be able to maintain her position in action. Therefore, unquestionably the nurses are third in value in preparing your layout. At this point it is well to glance at Chart No. 500 which outlines "the factors incident." Since each of "the concerned" are to be measured later by these factors, it will be found that because of the length of time in addition to that which the surgeon spends in the hospital, of the nurses' moment of duty, that in many departments the nurse is advanced to second position in planning consideration.

The intern is fourth in consideration for the reason that under the direction of the resident physician or doctor in charge he is responsible for the patient while the attending surgeon or doctor is absent. He must also be given ample opportunity to improve his theoretical medical knowledge with practice. He should not be burdened, therefore, with duties that rightfully belong to someone else and his position should give him that freedom essential to follow up the cases under his care.

Science in every one of its branches is concerned because of the growing tendency to use the hospital for educating medical students and nurses. Therefore, in planning, education of the student is fifth in consideration. The hospital owes a debt for its fact of being to science which in turn is directly responsible to society and, therefore, this debt is partially repaid by helping science to educate some of her members.

The relatives of the patient are thought of next in planning because whatever affects their near ones is reflected back to the outside world through relatives and near friends. Under duress of sickness, emotions and nerves are strained and the name of the hospital is often connected with various kinds of neglect and inhuman rule given the relative who broadcasts it in no uncertain terms to the outside world.

The next of "the concerned," or seventh, is the entire hospital personnel, all of those regardless of their station or duty who have to do with the coordination of the many departments into a workable whole. Where the borderline of duty has not been worked out exactly and where services overlap the perfect cooperation of all departments must be considered in plan of arrangement in order that perfection, if attainable, may be had.

Finally as the eighth of "the concerned," is society. Whatever happens to the patient in the hospital, happens to society. The value of the life of one of her members is at stake, her funds have been used, her sciences have been called upon, the health of her members is often at stake, the virility and hardiness of her future generations is being affected whenever a patient is taken care of in the hospital. At once, it will be noted that the hospital as a whole is intimately related with society, more particularly, of course, with the community which the hospital serves and, therefore, the hospital in the community is a logical health center.

THE FACTORS INCIDENT

Time		**Place**
	Available Personnel	
Technic		**Equipment**
	Phenomena	
Controlled?		**Uncontrolled?**
Travel		**Mechanization**
	Clear Pathways	
	Records	

Chart 500.

Above it was mentioned that the relative importance of "the concerned" was often modified in the various departments of the hospital by the factors incident. On chart 500, these factors are outlined and are to be used as secondary rulers in measuring values in each department.

The first factor incident is the place which, of course, is the hospital. This place must be adequate, not too large nor too small, but timed for the needs of the community as found under the community survey. Each department is a place where certain definite mechanized work is to be performed. Every step that is taken in excess of what would be normally required is to be avoided because a step wasted means wasted space together with waste of light, heat, and manpower, to say nothing of the time consumed in giving service to the patient. There may be a perfectly appointed obstetrical department with all the most modern equipment and yet there will be occasions when a delivery will take place in the ambulance at the door of the hospital. Thus place is the first factor incident.

Time is the second factor incident. Waste of time through improper arrangement, affects the patient. An emergency at night modifies any technic because at nighttime the ordinary social rule is observed and rest must be had. Although the surgeon may be available, there will be a lapse of time until he can arrive. Thus the time factor must be considered in every department until its service is carried out to the patient in order that it will not be wasted.

The third factor incident, available personnel, is very important and departments should be arranged in a simple manner as regards routine in order that in emergency a skeleton organization for that department may function efficiently in the absence of the regular personnel. It will be noted that here conservation of space and time are essential and it is entirely possible

that through correct arrangement the personnel required may be diminished.

The next factor incident, or fourth, is the equipment of the institution or department. With the proper equipment the patient receives better service with less delay in more conservative space and with less personnel, the hospital thereby giving greater service and conserving expense. The planning of the equipment of the department should be the third consideration in planning a department layout. The department should be arranged to accommodate the equipment as well as to accommodate the others of the "concerned" and while this is usually last in the thought of the planner every reason indicates that it should receive greater consideration.

The fifth consideration is the technic and when it is considered that technic cannot be developed until the equipment and the place have been arranged and granting that there can be no compromise in technic it is usually the case that the technic is built around the newly completed building only later to be revised to fit the equipment. The technic touches the patient on every side directly and indirectly and closely interrelates in importance with every other one of the factors incident.

The sixth factor incident is the phenomena some of which are controlled, others not controlled. The patient is affected in the hospital directly and indirectly by all of the natural laws of physics, heat, light, motion, electricity, hygroscopy, ventilation, atmospheric pressure, color, emotions, noise, vibration, and mechanics. For example, static electricity developed in the surgery, may be given as an example when in using ethylene gas a small static spark under favorable atmospheric conditions can cause an explosion and thus give a bad result to the patient. Improper lighting may also hurt the patient. Undue noise will affect the patient. In fact all of these factors under phenomena are very important and should receive consideration in planning. Now, how can these physical phenomena be controlled? There are acoustic treatments for the excess sounds both exterior and interior. By having the atmosphere so humidified in the surgery all chances of developing a potential are eliminated through the fact that water vapor in the air breaks down differences in potential and gives balance. Further, with proper humidity the febrile patient is more comfortable. Less heat units are needed to keep the building at correct temperature. It is true the surgeon may perspire more profusely but if he is shown that this humidity is essential, he will be one of the first to advocate its use. While all of these phenomena have not been controlled, there then remains much to be done by science through research in helping to eliminate the evil effects of some of them while being in a position to utilize others of them which undoubtedly will benefit the patient.

The next factor incident, number seven, is mechanization. This has to do with the usual method of motion of procedure of each of the necessary services rendered the patient or made necessary in rendering the patient any given service. Mechanization must play a part in connecting up technic, equipment, available personnel with time, place, and the patient. It is a motion study worked out in theory and applied to a department carrying the minor parts of the duty of that department to a consummated end.

The factor incident, number eight, is travel. It will be seen that travel at once connects back through mechanization to available personnel, time, and the patient. Travel is expensive either vertical or horizontal. It reflects waste not only in a particular department but often on each floor of the hospital. It burdens the payroll with additional expense through increasing the needed personnel. It wears out nurses and prevents the patient from receiving a given attention when it should be administered. It develops directly into loss of time and time is never recovered.

The next factor incident, number nine, is "clear pathways." Clear pathways of service affect the patient in the various therapies that are administered. Congestion and blocking of legitimate traffic by legitimate traffic shows improper planning. A clear pathway for every service is not an unfair thing to be demanded for the patient's welfare. Thus in planning each department, mechanization of travel will mean clear pathways when time is considered.

The last factor incident is the records. The availability of the records and their completeness affect all of "the concerned." They eliminate the possibility of failures to a great extent. They conserve for science and society data which are essential if medical practice is to develop into a more exact science. Thus, facilities for completing records and having them immediately accessible in the various departments of the hospital where the patient directly or indirectly will receive care is an essential consideration in planning.

Thus far, there has been considered of the three yard sticks "the concerned" and the "factors incident." It has been shown that there is close contact with modifying measurements between any of "the concerned" and any of "the factors incident." All of this in the end brings a result.

THE RESULT

The Perfect Recovery

Conditions Unchanged

More Study — **Re-diagnosis**

Failure with Mutilation

Failure without Mutilation

Follow-up — **Autopsy**

Preventable Death

Nonpreventable Death

Chart 600.

The result as will be noted from chart 600 is divided into four parts—the perfect recovery is the first and desired result which must be followed up to complete the record after the patient leaves the hospital. The next result is condition unchanged and this result reflects a failure. It shows that there should be more

study and that the case should be rediagnosed, after which it is again returned to the hospital for a new line of treatment. It is this result (inexactness and superficial study) that gives the surgeon and the hospital a bad name. When additional funds are needed for a new unit the examples of failure which have since passed into the hands of the so-called "quack" react in proportion to their occurrence in the hospital calendar.

The next result is a failure with mutilation where the patient leaves the hospital in a worse condition than when he was received. The next result is a failure without mutilation where the patient is discharged after he has been thoroughly studied out and where no benefit because of his condition has been possible.

The next result is death which is divided into preventable and nonpreventable deaths after the autopsy has fixed the cause.

It is believed that these measurements considered in their correlating aspects applied to the development of layout for departments in the hospital will result in a more standard, reasonable, and efficient department.

With the yardsticks of the hospital values briefly explained above by referring to chart 1300, it will be seen that some safe average sizes in a comparative-size schedule have been arranged for the following:

At the right the variation in width of hospital buildings from 38′ 9″ to 53′ 6″ will be noted. There is a shaded portion from 38′ 9″ up to 44′ 3″ in between which a safe average width may be found. It must be considered that every additional inch of width means thousands of dollars in the upkeep and administration expense over the period of life of the building. Therefore, in making the plan of your department be conservative, yet do not permit cramping. It will be shown later how it was possible to save considerable money in one department.

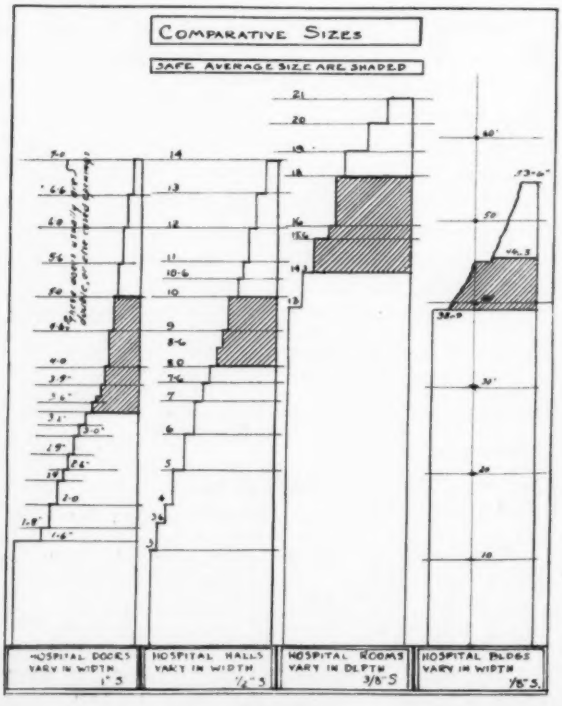

COMPARATIVE SIZES
SAFE AVERAGE SIZE ARE SHADED
HOSPITAL DOORS VARY IN WIDTH 1" S
HOSPITAL HALLS VARY IN WIDTH
HOSPITAL ROOMS VARY IN DEPTH 3/8" S
HOSPITAL BLDGS VARY IN WIDTH

CHART 1300.

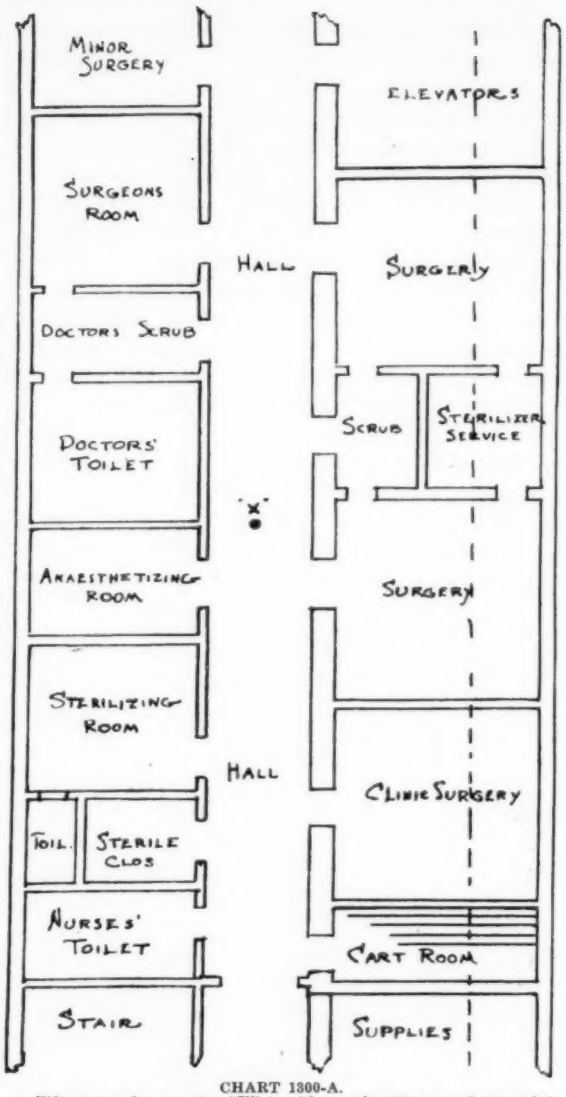


CHART 1300-A.

Fifty paces from center "X" to either end; 100 paces from end to end; no nurses' work room; no nurses' rest room; toilet opposite surgery; no instrument room; cart and observation rooms not needed, in ordinary hospitals; too much space to surgeons' suite; shaded area is wasted space; no sterile service for clinic surgery. *Note:* 103,200 cubic feet wasted space at 80c equals $82,560.

To the left of this schedule of hospital building widths will be found the various depths encountered in hospital rooms. It will be noted that these widths run from 13′ to 21′. A shaded portion varying between 14′ 3″ and 18′ gives a safe average size for the depth of room. It is to be noted here that in teaching hospitals the depth of room has had to be increased in instances to accommodate large classes of students. In planning the size of your rooms it will be well to keep in mind the limit 18′, the hall width, and the width of the room on the other side of the hall in order that you will not exceed the limit of width of 44′ 3″.

Immediately to the left of the schedule showing the variation in the depth of hospital rooms will be found a table showing variation in the width of hospital halls.

It will be noted that they run from 3′ to 14′ while the shaded portion shows an average width of from 8′ to 10′. You may safely use an 8′ width for all hall widths in main corridors of the average hospital where large groups of students will not congregate.

To the extreme left on chart 1300 will be found a schedule of the variation in width of hospital doors. It will be noted that this width varies from 1′ 6″ to ?′. The shaded portion shows safe average sizes of single doors from 3′ 2″ to 4′ 6″ in which sizes single doors can be swung, while from 4′ 6″ to 5′, the limit of safe average size, double doors would be used. With these four principal measurements in mind you can begin to develop your particular layout.

The subject of this paper, "The Surgical Suite," up to this time has been neglected, it might seem. But, in reality, the measurements given heretofore will now be found to play an important part in the layout of a surgical department. Chart 1300A shows a plan of one hundred feet in length in the wing of a hospital that is now being built. It shows the arrangement of surgeries, sterilizing rooms, etc., and the shaded portion immediately at the right shows where 103,200 cubic feet of waste space valued at $82,560 was permitted. It is 50 paces from the center marked with X to either end. There is no nurses' work room, no place for the nurses to rest, no shower for them; the toilet for the nurses is immediately opposite the entrance to the observation platform or clinic surgery where students will be entering during surgical periods. It is observed that cart and observation rooms are as a rule not needed in the average hospital; it will be noted that too much space has been given over to the surgeon's suite; there is no sterile service for the clinic surgery and access must be had to the sterilizing room across the hall for this service. It is found that frequently to get from any room to another room access must be had to the hall; the supply room is away from the sterilizing room and there is a toilet located just off the sterilizing room. There are three and one-half surgeries in this plan; the operating rooms are too wide and too deep, denoting waste of time, travel, and space which reflect back to the patient and make for expensive administration.

Referring to chart No. 1300B, it will be found that the same section of space planned according to the measurements outlined above gives the following:

Four and one-half surgeries with a plaster room which, if counted as a surgery would give five and one-half surgeries. A sterile service room between each two of the operating rooms. Connection through the surgeries at the bottom to the extreme end without interfering with the sterile field. Scrub recesses placed in exact position eliminating the use of the hall, sterilizer closets in each of the sterile-service rooms which give quick service for sterile-surgical service to any of the surgeries. A main hall eight feet wide, a commodious room with showers for the doctors at the bottom of the hall which, it will be noted, is too near to the stairway, since the surgeon instead of completing and signing his

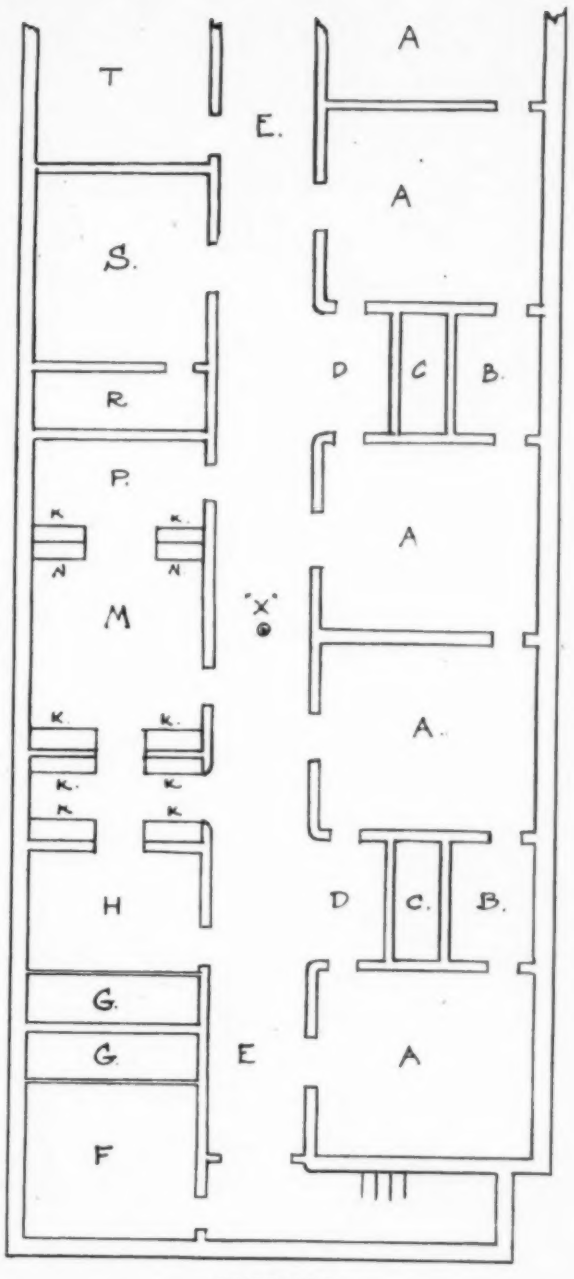


CHART 1300-B.

A—Surgery; B—Sterile Service Room; C—Sterilizer Closet; D—Scrub-up Recess; E—Main Hall; F—Doctors' Suite; G—Showers and Toilet; H—Nurses' Suite; K—Supply and Instrument Cabinet; M—Nurses' Work Room; N—Sink; P—Sterilizing Room; R—Main Steriliser Closet; S—Plaster Room; T—Surg. Supervisor, Historian, and Frozen Sections. The Surgical Suite, 50 paces longest run of travel end to end; 25 paces longest run from center -X- of main hall; 5 paces for surgical services. Note: Stairs are too near the doctors' room. Plaster room should be elsewhere. "X" denotes center of main hall.

surgical history located in room T, might take advantage of the nearness of the stairs and go down to the floor below to visit his patients. If proper routine is developed the surgeon will not do this except in an emergency. It will be noted that the space devoted to the nurse includes a rest room with showers and toilet, an instrument nook with proper cabinets, a large nurses' workroom with sink and cabinets, and a sterilizing room. It will be noted that passage may be had from the

nurses' toilet directly through to the work room and sterilizing room without egress or use of the main hall, keeping that passageway clear for its particular service. It will be noted that a place has been provided for the surgical supervisor, historian, and frozen-section laboratory which is portable in room T. Most of the yardstick measurements in charts 400 to 1300 have been observed in this plan and $82,000 has been saved which will equip this surgical suite in a very extravagant manner.

There is no doubt but that considerable criticism could be given to this arrangement. These charts are the crystallization of some measurements in a systematic, orderly way applied to a surgical suite. The detailed arrangement of mechanization, equipment, and technic will be given at a later time.

The Science of Refrigeration as Applied to Hospitals[1]

Harry Sloan, M.E., Milwaukee, Wis.

THE chief function of the hospital is to return to normal health those individuals among us afflicted with disease and ill health. Health is a relative term and probably, under our more or less artificial form of civilization, we rarely find a perfect specimen of humanity. In this connection health would be described as a state in which all the tissues were sound and all organs performing their functions in a normal way, the wastes and repairs going on progressively.

Ill health is a cause of very serious economic loss. This is recognized by corporations and the more progressive concerns are continually looking after the welfare of their employees. The city, state, and nation recognize that their vitality depends largely upon the health of their population and spend large sums of money annually safeguarding the conditions upon which good health depends. It is but natural that you who are giving so abundantly of your time and energy alleviating the suffering of humanity, should be interested in a science upon which the general health of our nation so largely depends.

It is difficult to discuss health without taking food into consideration and those not connected with the refrigerating industry little realize the important relation between food and refrigeration. It might be well to define refrigeration here, as the process by which a space or substance is cooled below the temperature of surrounding objects. Every science or industry has its history. The history of the use of refrigeration has recently been published, arranged in a very reasonable and interesting manner, by the National Association of Ice Industries and some quotations and dates will be taken from their paper entitled "The Romance of Ice."

This article shows how the cave dweller partook of the cold mountain streams, followed them up to the source where they found the snow and noted how refreshing was the cold water taken from these streams. It shows that the early Greeks used ice and quotes from the Greek poet Cimonides as follows:

> The Cloak with which fierce Boreas clothed the brow
> Of high Olympus, pierced ill-clothed man
> While in its native Thrace; 'tis gentler now,
> Caught by the breeze of the Pierian plain.
> Let it be mine; for no one will commend
> The man who gives hot water to a friend.

The inspiration for this ode came at a banquet attended by Cimonides when some of the more favored guests were served snow with their beverage while he was overlooked in this respect.

The early Egyptians knew the secret of cooling by evaporation. It is recorded how they filled shallow porus trays with water and placed them on beds of straw, exposed to the dry winds. The evaporation of part of the water cooled the remainder nearly or quite to the freezing temperature. This process is still practiced in India. It was also stated that Emperor Nero had slaves bringing down snow and ice from the mountains to cool his beverages and that Alexander the Great had trenches dug for storing snow. They also quote Lord Bacon in his "Sylva Sylvarum":

"Heat and cold are Nature's two hands whereby she chiefly worketh, and heat we have in readiness in respect of the fire, but for cold we must stay till it cometh or seek it in deep caves or high mountains, and when all is done we cannot obtain it in any great degree, for furnaces of fire are far hotter than a summer's sun, but vaults and hills are not much colder than a winter's frost."

Coming then down to the seventeenth century, we find that the French Government made an unsuccessful attempt at government ownership when it licensed the business of farming snow and ice. The farmers who received government favor thereupon raised prices with such studious regularity that the people refused to buy and the government was forced to relinquish its control of this commodity. Immediately thereafter supply and demand got into its stride and the business settled back into sanity. As Edwin F. Slosson, of the Science Service, Washington, D. C., explains in his article "Science Remaking Everyday Life":

"The chronicle of the century of effort to approach the farthest north of temperature, absolute zero, is as fascinating as the contemporary struggle to reach the geographic pole and unlike the latter has proved profitable at every stage. When Fahrenheit in 1724 stuck his mercury thermometer into a mixture of water and snow he thought he had reached the lowest possible point and boldly scratched O on the glass tube. But it was not long before scientists began to climb down the minus steps. In 1769 a Russian professor, taking advantage of a cold spell, froze mercury itself in a mixture of snow and nitric acid."

[1] A lecture delivered April 21, 1927, before the College of Hospital Administration of Marquette University, Milwaukee, Wis.

A hundred years ago Faraday, working in the Royal Institution of London, succeeded in condensing ammonia gas to a liquid by applying pressure and then cooling it. When the pressure was removed the liquid of course boiled off rapidly as a gas again, absorbing heat in doing so. This was a very important discovery and was followed in 1858 by Carre with the absorption machine and this was introduced in the United States in 1863. Dr. John Gorrie of Apalachicola, Florida, took out an American patent in 1850 for a practical process of manufacturing ice and this was succeeded by Linde of Germany who in 1873 and 1875 took out patents on the modern compressor for ammonia. At the same time David Boyle of the United States invented similar machines but little progress was made between 1875 and 1890. Due to an extremely mild winter in 1890, mechanical refrigeration was given a great impetus. The science has advanced and the work has become better understood and at the present time we have a great mass of very authentic data on the different refrigerants and more is being continually gathered.

The above short account of the early history of refrigeration indicates that its value to health and comfort has long been known. There is no mystery in the production of refrigeration and the entire process follows well-known physical laws. In all systems, heat is extracted from surrounding bodies by a substance having a low-temperature boiling point. The higher the latent heat of evaporation of the substance, the more heat will be absorbed per pound of refrigerant. Ammonia boils at 28° F. below zero and is the most common refrigerant used.

There are numerous processes used for preserving food gathered during the times of plenty for use during the season of restricted supply. We could mention chemical processes—dehydrating, pickling, preserving, etc., all of which change the structure or nutritive value. The process of refrigeration simply arrests nature's own methods of maturing. Fruit placed in cold storage will ripen less in ten days than it would have ripened in one day in a mild temperature. This process causes a minimum of alteration in the desirable food properties of products. Very little moisture is extracted and all the natural freshness and flavor are preserved. This directly and indirectly is of concern to hospital management—directly because food used in the institutions can be had in greater variety and be received in prime condition, indirectly, by the effect a good balanced diet will have on the community.

For the hospital work, two refrigerants are in most general use; first the ammonia machines and second the carbon dioxide. Some objections have been raised to the ammonia system on account of the properties of ammonia being very suffocating and harmful if let loose, but if this is taken into consideration when designing the equipment for hospital work, there is very small possibility of any harm or discomfort being done to patients by the escaping ammonia. It is best to place the equipment in the basement or service house and

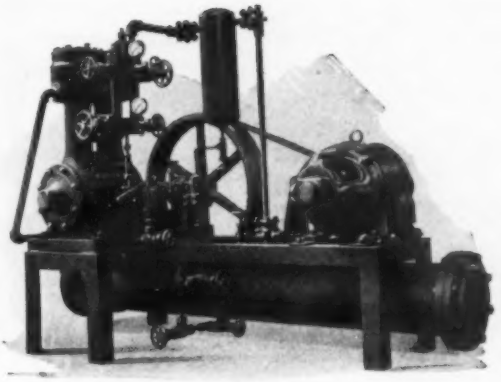


FIG. 1. VERTICAL TWIN-CYLINDER-COMPRESSOR REFRIGERATING MACHINE FOR HOSPITALS.

transmit the refrigeration through the medium of brine to the diet kitchen boxes and other refrigerators required in the hospital. The carbon-dioxide machines require approximately ten per cent more power per ton of refrigeration, operate at very high pressures and are not quite so well known by the operating engineers as the ammonia system. The machines can be made to operate reliably and give entire satisfaction and the carbon dioxide is harmless, of a heavy nature and will not rise through the building. Up to the present time its use has been rather limited.

The ideal arrangement for the hospital refrigerating plant would be to have the equipment installed in the service building or that part of the building devoted to the heating plant, kitchen, etc. The equipment would consist of one refrigerating unit for a small hospital and two units for large institutions. There would be a combined brine-cooling and ice tank of a size to supply the maximum demands. All the kitchen boxes and diet-kitchen boxes located on the different floors would be cooled by circulating cold brine from the tank. The diet-kitchen boxes should be located directly above each other on the different floors so that the brine lines may be as short as possible. Due to the large amount of refrigeration stored in the cooling tank, the machine could be closed down for several hours without affecting the temperature of the boxes, by simply keeping the brine pump circulating the cold brine. The smaller installations, where the machine attendant has many other duties to perform, could be automatically controlled and the machine would be governed by a thermostat placed in the brine tank and would be closed down when the brine was cooled to any predetermined temperature.

In this arrangement the brine is cooled by evaporating coils in the tank. The ammonia connections are short, the machine being adjacent to the tank and all the ammonia piping confined to the machine room. The ice is frozen in moulds usually holding 50 pounds of ice and of such dimensions that it would require about ten hours to freeze the ice. If desirable and convenient the ice after freezing can remain in the tank until required. In some cases the diet-kitchen boxes are cooled with

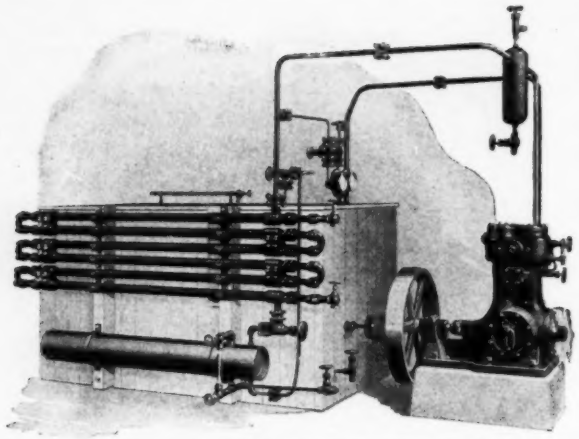


FIG. 2. BRINE-COOLING AND ICE-FREEZING TANK FOR HOSPITALS.

small tanks in which trays are inserted for freezing small cubes of ice.

To illustrate the type of equipment usually installed in hospital work, Fig. 1 has been shown. This is a vertical twin-cylinder compressor of the self-contained type. It is convenient to install, as the compressor and entire high-pressure side is mounted on one frame and requires no foundation other than the ordinary concrete floor always found in the hospital.

The brine-cooling and ice-freezing tank is illustrated by Fig. 2. Here is shown the same type of compressor but not of the self-contained type. The compressor is shown mounted on a separate foundation while the double-pipe condenser is mounted on one side of the ice tank. Immediately below the condenser is the liquid ammonia receiver. The ammonia-evaporating coils are submerged in the brine tank.

We can use Fig. 2 to explain the cycle of operation. Ammonia gas evaporated in the brine-cooling and ice tank is drawn to the compressor through the pipe leading from the tank to the compressor. The gas is compressed and passes through the oil trap, shown directly above the compressor, to the double-pipe condenser. The gas is cooled here by water passing through the inner pipe of the condenser and, being under pressure, condensing to liquid form and flowing to the liquid receiver, shown below condenser. The liquid ammonia passes from the receiver through a regulating valve, usually referred to as an expansion valve, to the brine cooling coils within the tank. Here the liquid evaporates and in order for a liquid to evaporate, it must be supplied with heat, as the brine immediately surrounds the evaporating coils, this heat is extracted from the brine and the brine is cooled. The tank is well insulated so that heat will not readily flow from the room to the brine. The ammonia is now in gaseous form again and the same cycle of operations are repeated. The ammonia is used in this way over and over again and the same charge will last for a long period.

Physical Therapy—A Gift and an Obligation

Louis K. Poyntz, M.D., Chicago, Ill.

THE physical therapy department in a modern hospital is, at the same time, one of the newest, least utilized, and most important units of the institution. It is new, because only recently we have come to grasp in a superficial way the significance and value of the potent agencies which constitute the method. It is one of the least utilized, because the great bulk of the profession and the public do not yet appreciate even its already demonstrated merit, let alone the potential greatness of its function. It is one of the most important, because it is basically sound in that it is the rational method of reaching out for help directly from the unfathomable source of power—natural agencies. It is effective because it does actually produce clinical results.

Today men are thinking more seriously and analytically than ever before. This is as it should be, so long as our thinking and exploring is directed along the road of development, which means progress. Each new discovery in science seems to be just the opening of another door, giving entrance to a new realm wherein lie untold possibilities. At the moment there are so many open, inviting doors that one is perturbed and dazed in trying to select which one to enter and explore, for no one is privileged to enter all.

Physical therapy seems new, and yet it is only some aspects of it that are new. Where is the physician who does not prescribe "fresh air, sunshine, simple food, warmth, and a clean body?" These are major items in the practice of physical therapy; they have been known since man began to think. They are, in truth, the oldest and sanest of all therapeutic measures. We are living in a changing world, and the ability to adjust and accommodate ourselves to changing environment differentiates living creatures from inanimate ones. We are constantly in a condition of flux, altering our customs, our habits—even our manner of thinking—with the passing of the years. So it is that time, the inevitable abrasive, is slowly but surely grinding away our old conceptions and replacing them with new. Just so long as these new ones are conceived on sound, logical bases, are we progressing.

It is only when we misinterpret or misconstrue that we find our progress blocked. The state of our civilization or degree of our advancement is merely the index of the extent to which we have properly adapted ourselves to the immutable laws and utilized the inexhaustible stores of natural forces—which have been in existence since the beginning of time, but which we are only now learning to tap. Little surprise is occasioned, therefore, in finding that we have been able to glean valuable aid from this ubiquitous permeating force called electrical energy. What electrical energy really is we do not know, but in a convenient manner we have,

according to habit, labelled this force with a name-tag. But we are constrained to stand in awe of its undaunted power. True, we do know much about the behavior of electricity: We have even learned to harness this Colossus and have it obey our will—while, and only while, we do honor to the unalterable laws that govern it. Let us dare presume to disregard these laws, and it flashes death and destruction. Nevertheless it is a docile, industrious, constructive force while we regard its established rules.

This, the age of electricity, has seen an absolute revolution of man's activity, of transportation, communication, and even of thinking. The blessings that have been bestowed are the reward for the searching intelligence of man's genius. It is reasonable that this force should be as useful in healing as it is in other arts and sciences. The nearer we live to nature, and the more we realize and abide by natural laws, the more rational is our existence, and the more certain are we of our natural prerogative—health.

Those of us who have been engaged in the active practice of medicine for a number of years have witnessed a gradual but perceptible change in methods of treatment—and I think we have made progress. If one were to search the prescription files of twenty years ago, and compare them with those of today, I believe he would again be convinced that "The old order changeth, yielding place to new...," evidenced by the prescribing of fewer and fewer drugs, which seems to argue the growing lack of confidence in drugging. Ask any physician why he uses colchicum in gout, have some therapist explain to you the exact modus operandi of quinine in malaria, of mercury in syphilis, or one of the dozen other established medical procedures. He cannot give you a satisfactory explanation of just how they act, only, he claims, that they do work, and for that we are thankful. Well, so much for the older methods—just what can we expect from the newer ones? At first glance it is obvious that the entrance examination for any therapeutic measure is much more difficult today than it was a generation ago. Then the mere statement of someone that it did work would suffice, but today we are more skeptical and more exacting. This is as it should be; yet, despite this, the profession at large and the American Medical Association, the organized association and the official mouthpiece of legitimate medicine in the United States, has openly investigated, appraised, and approved physical therapy, so that today it stands accepted and endorsed and on a par with the older methods. Now it faces the serious danger of the customary pendulum swing from optimism back to pessimism, unless we take immediate active measures and make serious efforts to prevent the misuse or even abuse of this new gift to the art of healing.

Perhaps the most potent of all the force for harm is misunderstanding. At the back of all wars and differences between nations, creeds, and individuals, is misunderstanding. Our present duty to ourselves and to the hosts who look to us for guidance and help in their distress is to learn the laws that govern these forces, so that we may use them properly. Carelessly employed they may actually be as dangerous as they are helpful. We use fire in a constructive way, but we must constantly guard against conflagration. We may use physical therapy in just the same way, and with just the same constant alertness for its penalties.

How, then, shall we go about this in a practical way? That question may be answered by looking back: How did we learn to read? This was at first a tedious process. Meaningless mumbles gradually grew to significant sounds, and in this way we achieved our first step in reading by mastering the alphabet. In this new branch of medicine we must learn our alphabet, which now consists of an acquaintance with established physical and biological laws, which are eternally acting, and to which we must comply. Therefore, before a physician can consider himself conversant with this therapeutic method, he must first know thoroughly his basic principles. It is only then that he may perform an intricate, complicated maneuver, knowing what he is doing and why he is doing it. In brief he must first acquire an intelligent conception of the method and he will then find the minor details almost automatically. Of course, the actual experience of practical application is of importance, but is merely putting to work the laws and principles that his acquaintance with physics and biology permits. It has always appeared to me a sad commentary on the intelligence of medicine that so few men take a serious interest in this natural essential groundwork, the majority preferring to accept something or to do something merely because they are instructed how, never daring to ask or really caring why. Naturally such persons are not, and cannot be, pioneers or contributors to progress except by sheer luck or accident. Therefore it behooves us, as thinking people, with an innate desire to be honest and a wish to be useful, to erect for ourselves a sound foundation by a thorough knowledge of the elementary aspects of this branch of legitimate medicine. When this is done a light dawns, and results are neither surprising nor mysterious—rather, in fact, they are anticipated and readily explicable and confidently repeated.

In conclusion let me state that ours is a tremendous responsibility. This newer therapeutic branch is ours to cherish and use, or to toy with and abuse. It is entering into a period of crucial importance. The next few years will mean a great impetus or a deplorable retardation of these new-found powers for good. If, through our smug indifference or self-satisfaction, we allow the latter misfortune to occur we must be willing to shoulder the terrible responsibility of the thousands of unfortunates who will inevitably pay the penalty of our negligence by being deprived of the assistance of this God-given gift. Therefore we must keep faith. This is a heritage and confidence we dare not violate. Our efforts will supply their own compensation, for there is no joy like the supreme satisfaction of the consciousness of a task well done.

Hospital Progress

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THE HOSPITAL CLINICAL CONGRESS OF NORTH AMERICA

The twelfth annual convention of the Catholic Hospital Association is being identified this year with the Hospital Clinical Congress of North America. Some may think it bold and presumptuous on the part of the Catholic Hospital Association thus to identify itself with so high-sounding and pretentious a gathering as a Clinical Congress of North America and yet I shall endeavor to show that it is neither bold nor presumptuous but just brave, courageous, and in keeping with the facts of the career of the Catholic Hospital Association.

It is brave and courageous because there is very little precedent to go by. There is, however, enough to go by in the experience of the College of Surgeons during its sectional meetings of this year and at some previous clinical efforts of the Catholic Hospital Association.

The experiences of the College of Surgeons in its sectional meetings during the past few months, held in every part of the United States and in a few parts of Canada are ample evidence of the value of what is now called a hospital clinic as distinct from the well-known surgical and medical clinics carried on by the medical profession.

The Catholic Hospital Association has closely cooperated with the American College of Surgeons in these hospital clinics and it is so convinced of their practical nature and educational value that it has incorporated this clinic procedure into the teaching program of the College of Hospital Administration.

After all it seems a very simple matter to demonstrate clinically, that is, by way of teaching, the set-up, equipment, organization, and procedure of any or all hospital departments. It is just an old thought carried over into the hospital field where heretofore hospital conventions and meetings have been satisfied with more or less dry theoretical papers. It is, therefore, not a bold undertaking but a very simple, practical way of enabling the hospital world to learn the newer and better hospital procedures without the necessity of actually living in the hospital during the time of a congress.

There is not much presumption, if any, for the two organizations that have led in hospital standardization now to give a practical turn to the hospital meetings of our continent. For ten years the Catholic Hospital Association has faithfully and unremittingly labored with the American College of Surgeons to make its program of standardization understood and effective with the whole hospital world of our continent. This standard of the College of Surgeons was accepted, explained, and even defended at times, when no other organization seemed particularly interested and now that the College of Hospital Administration has come into existence through the generous cooperation of Marquette University and has met with the approval of all the organizations interested in the betterment of hospitals, it seems most fitting that this College should give summer courses in hospital administration and try to make the Hospital Congress an outstanding demonstration to all who will avail themselves of this opportunity.

Courage, intelligence, and industry devoted to the higher, saving things of life usually meet with the approval of all but the petty and narrow-minded.

—C. B. M.

THE PROGRESS OF THE INTERNATIONAL CATHOLIC GUILD OF NURSES

This is an age when organization is in the air, yet few organizations have moved forward so swiftly as has the International Catholic Guild of Nurses during the two and one-half years of its existence. At the present time the Guild counts some seventeen organized chapters, with an ever growing membership. Its activities are developing more and more and becoming formulated into useful and helpful lines. The experience of this or that chapter is encouraging others to imitate its successes, as they read them in the pages of Hospital Progress, and in the general press.

The criticisms which were offered against the Guild and its program are already disappearing under the influence of actual experience. It has been found that far from being a competitive organization, the Guild is bringing forward useful workers in the general field of nursing organization, while the splendid group of Catholic nurses which it has already gathered into its membership would never have been able in any other way to exert the influence which they possess through their organized cooperation.

The hearty interest which is now being shown in the Guild pilgrimage and in the financing of the International Headquarters will no doubt be manifested with still greater intensity when the group plan of insurance for Guild members becomes known and studied. Meanwhile a rush of new members are coming into this already well-established society, and they will no doubt bring with them still more enthusiasm, interest, and cooperation. Who can predict what will be the ultimate benefits of a society which has already done so much good and produced such happy results? We have never appreciated sufficiently until now the splendid group of Catholic women who are giving their lives to the care of the sick. To say that there are forty thousand Catholic nurses in the United States and Canada is merely to quote statistics. To say that the elite of these nurses are being banded together in mutual and unselfish co-

operation for Catholic ideas and ideals, means a new era in nursing progress, spiritual, social, and educational.

—*E. F. G.*

NURSING AND A LIVING WAGE

The famous encyclical of Pope Leo XIII on the rights of labor, which has been called the gospel of labor, strongly and clearly vindicates the right of every worker to a living wage and this right to a living wage applies to everyone who leads a life of service, to professional folk as well as to those who labor with their hands. "The laborer is worthy of his hire," rings true in every human relationship. Those, therefore, who, like the nurse, devote their lives to service, have a right to a living wage. And what does this term mean? It means a right to a pecuniary recompense for service which will not only insure one's daily bread, but also enable one to live with reasonable comfort and dignity, to meet ordinary obligations and to lay by enough to make provision for declining years or for times of sickness or disability.

It has often been said that in many places in this country the nurse's average earnings are just about equivalent to the pay of a scrubwoman, taking into account the days of nonemployment and sickness. This certainly indicates that the nurse is not getting a just recompense for her labors.

Individual nurses can do little for themselves in this regard. It rests, therefore, with the friends of nurses and the nursing profession and with the organized societies of nurses to make the public aware, the public which often complains of high charges for nursing, that many nurses are not even getting now a living wage and to bring about by all lawful means that, in this case also, the laborer may be found worthy of her hire. By such adjustments as group nursing and hourly nursing, the expense to the public of a living wage for nurses may be greatly lessened.—*E. F. G.*

CAMPHOR AND YELLOW FEVER

In an interesting book which we recently read, "The Jesuits in New Orleans and the Mississippi Valley," by Father Biever, S.J., the author gives a sketch of Father John Duffo, "a man of iron constitution and dauntless courage," who "stands out preeminently as a yellow-fever hero." He passed through all the epidemics from 1850 to 1897, sometimes giving the last rites of the Church to as many as eighty or ninety persons a day, by the aid of a horse and buggy which the Citizens' Committee put at his disposal. "Yet, he himself," the account goes on, "never contracted the dreaded disease. He ascribed his immunity to the abundant use of camphor, with which he rubbed his hands and face, and with which he impregnated all his garments. In the light of the present theory of the transmission of yellow fever by infected cistern mosquitoes (Stegomyia Callopus) his immunity can easily be explained."

At first, to rub oneself with camphor seems to have no connection with safety from disease. Yet, we know now why Father Duffo's precautions were effective. Such examples of curious and unsuspected relations should make theorists cautious and humble. The ways of nature are only very imperfectly known, even today. We are safe only when we confine ourselves exactly to the things of which we are sure, calling theories only theories and respecting other people's opinions merely as opinions.—*E. F. G.*

GREEK AND LATIN IN NURSING SCHOOLS

A recent issue of *Hospital News,* published by Good Samaritan Hospital, Cincinnati, Ohio, contains an article by a Sister of Charity of Mt. St. Joseph, Ohio, entitled "The Value of Greek and Latin to the Student Nurse." The Sister's article sets forth clearly by explanation and example the very great help that a knowledge of these languages gives one toward understanding and retaining in memory the countless medical terms, practically all of which are derived from Greek and Latin.

The Sister advocates a special course in technical Latin and Greek for the first year of the nursing school. Such a course would certainly prove a boon to the nurse not only during her student days but during her whole career.—*E. W. R.*

THE "SOME-DAY" HOSPITAL

We frequently have called attention to the fact, that hospitals, like individuals, have a spirit of their own, a character and atmosphere which the experienced observer can soon find out. This spirit is the reflection, of course, of the collective and individual attitude of the hospital workers. And it is expressed in the hospital policy. Just as the life of an individual is the reflection of his inward principles and ideals, so the life of the hospital in its outward policy, is an expression of its spirit.

Now, the "some-day" hospital is the hospital which, at some future time, intends to do quite notable things. Some day it will keep excellent records. Some day it will have splendid staff meetings. Some day the laboratory is to be quite remodeled so as to be up-to-date in every particular. Some day, there is to be a library in the hospital; Sisters and nurses and patients are to be abundantly supplied with new and excellent books. There is no end to the really excellent and really desirable things which are to come into their hospital "some day." Alas, the only melancholy feature of such a hospital, a feature which, however, throws a gloom over all its prospects, is that the day in question never does arrive.

The "some-day" hospital exists among us in sufficient numbers to justify a protest. Everyone knows what way is paved with good intentions. It would be too much to say, that the executives of the "some-day" hospital are traveling down the broad and primrose path. But there is reason at least for apprehension about the future of the hospital where the executives say too often to themselves and to others, "we are to have such and such an excellent improvement in this hospital—some day!"—*E. F. G.*

The Hospital and the Intern[1]

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ABERNATHY said the hospital is the only proper college in which to rear a true disciple of Aesculapius. The modern hospital has, and all hospitals should have, intern service. The intern is of as much value to the hospital as the hospital is to the intern. The intern service increases the usefulness of the hospital to the staff and to the community. The stimulus of the mere presence of the intern neutralizes that clinical apathy certain, sooner or later, to beset the medical man who, lonely, makes his rounds.

With intern service better work is done by the staff, and also for the staff and for the public, our patients; besides, there is the value to society of the practical education of these young men, who will carry with them to all parts of the country good methods and thereby extend enormously the work of an institution. The hospital is only as good as its staff; and your intern is the embryo of your future staff. The intern brings with him ideas and ideals gleaned from our large medical teaching centers; and we encourage our men to express themselves for the improvement of our service. We insist that they do not openly criticise our methods, since many of their ideas are not fitted to our requirements; but we invite their suggestions and always consider them. If these are rejected they are advised why they have not been adopted. It is a mistake to invite their suggestions and then simply dismiss them, since I have found that this lessens their enthusiastic cooperation. We endeavor to make them feel that they are an integral part of our institution and they are each given responsibilities for which they alone are accountable. These small responsibilities, I believe, increase their cooperation and at least make them know that they are more than mere hospital flunkies.

Hospital as a Medical College

The hospital is the college of practice and it should not shirk its obligation in supplying our ranks with trained men. The profession should be recruited from hospital-trained men, who have been taught to think and observe for themselves and who will become independent, competent practitioners of the *post-graduate college of scientific medicine,* the modern *hospital,* men whose faith in the possibilities of their art has been strengthened, not weakened, by a knowledge of its limitations.

The hospital is the college in which as clinic clerks and surgical dressers, the interns slowly learn for themselves under skilled direction, the phenomena of disease. It is the true method, because it is the *natural* one, the only one by which a physician grows in clinical wisdom after he begins to practice for himself. Most certainly the essential part of medical instruction is obtained at the bedside and not in the lecture room. Nothing seen at the bedside is lost; the rhythms of disease are learned by frequent repetition; its unforseen occurrences stamp themselves indelibly upon the memory. The outstanding picture at the bedside is always vividly visible for long periods thereafter; whereas the paragraph of the text is easily forgotten.

Before the intern is aware of what he has acquired, he has learned the aspects and causes and probable issue of diseases he has seen and the proper mode of dealing with them so far as is known to his superiors. Therefore, let us dismiss the question of the need of interns by merely again reminding the reader of the mutual advantages to the hospital, the intern, the staff, the whole medical profession, and greatest of all to the public, by this arrangement.

Securing Interns

I have had several requests from hospitals for help in securing interns. Usually the request runs like this, "We could use one or two interns if you could get them for us." The problem of supplying hospitals with interns is not quite so simple as it would seem to many. After a man has spent years in securing a preliminary training and then four more years in obtaining his medical basic training he does not blindly put his hand in the hat to pull out an appointment to a hospital from which he hopes to be post-graduated as a capable medical man. Rather he chooses wisely and studies all his possibilities. I think he uses more care in the selection of the hospital for his internship than he does in the selection of his medical school. Most of them write to many institutions and select what best fits their needs. Thus it appears to me that those institutions which offer these young men opportunities to improve themselves never want for their services and others with but little to offer always cry, "We cannot secure interns." Those hospitals connected with teaching institutions always have more applicants than vacancies.

Most of our better medical schools are now requiring their students to have a fifth-year hospital course, but they also specify that this year must be spent in a hospital which has been rated as acceptable for the training of interns, by the Council on Medical Education of the American Medical Association. Further, the Council requires that a hospital to be so rated must have a bed capacity of at least 100, yet there should be an intern for every thirty patients, so it is seen that even the smaller hospitals could utilize an intern to good advantage and the intern could likewise secure some benefit by his service even in a hospital with only 25 patients.

Certainly, it is unnecessary to say that all of our larger hospitals, I mean those of 100 or more beds, should secure this rating and thereby establish their staff as well as themselves in the public confidence, by having the stamp of approval of our national organization, the American Medical Association, that they are

[1]Read at the meeting of the Indiana Conference of the Catholic Hospital Association at South Bend, Indiana, November 16th to 18th, 1926.

fully equipped, qualified, and managed to care for the sick. Those that are not qualified owe it to their staff and their patients to correct their defects so that they can in a modern way and scientifically care for their cases and secure approval.

The smaller hospitals, I mean those of a bed capacity of less than 100 beds, which fact alone eliminates them from securing a rating, could secure interns by affiliating with some larger institution, whereby interns might be farmed out to them for periods of from eight to twelve weeks.

This method of securing interns is also used by special hospitals, like tuberculosis sanatoria, psychiatric institutions, orthopedic hospitals, etc.

Even after securing their rating, many of the hospitals still complain that they cannot secure interns in numbers sufficient to meet their requirements. When any institution first puts in the intern system it has the same difficulty in securing interns as the embryo medic has in securing patients. As the patients fear the young doctor, so too the interns distrust the institution with a new intern service. Anything new has rough edges which are smoothed only by wear.

I might briefly outline our own experience in this matter. In 1923 we were unable to secure interns and we were not rated. We did receive a few applications, and services were tendered them but none accepted. We stopped, in our daily routine, for introspection and with some financial expenditure, we organized a real staff, and with much arduous cooperation on the part of the Sisters, we received the approval of the Council on Medical Education. Our difficulties, however, were still with us, for we still had no interns.

We now thought that perhaps, since the interns were not coming to us, it might be a good policy for us to go to the interns. Like the salesman we thought we had the goods, but the prospective interns did not know about it and apparently did not care about it. I was the victim chosen to go out and sell our stuff. I finally landed two and they both turned out to be capable, conscientious, and courteous gentlemen.

These two men were so satisfactory that the succeeding year I was again detailed to secure interns. I found this much easier than in the previous year, since the first two men were fraternity men and heralded the information that they were getting a good service. This year I received five applications, all of whom were interviewed and from them, three were selected. This last year I received applications from men all over the country, from Boston, Mass., to New Orleans, La., perhaps a hundred in all, from whom we selected six men. I believe our intern service has done as much as any one thing to bring our institution into favorable repute with the medical profession as well as the public. Just to mention one instance, we augmented our staff by the addition of five men from an adjacent town who previously had been taking their cases to other hospitals. I asked one of these men why he had changed, and his reply was to the effect that his patients were better cared for at our institution; because, since he was at a distance from the hospital, he felt at ease, knowing that an intern was carefully watching his case and this saved him many trips which he would otherwise have had to make.

Regulations for Interns

Do not misunderstand me nor get the impression that we permit interns to practice medicine, for we maintain a hard-and-fast rule that they must devote their full time to their services and are not permitted to have private cases either in or out of the hospital. We have also found that this rule is imperative to prevent anxieties which might arise in some of the staff members. We have been able constantly to shift more responsibilities upon the interns' shoulders, and our service with them has been so satisfactory that we are planning to have nine interns for the ensuing year.

Our interns are lodged in the hospital, given laundry service, and paid forty dollars per month. The monetary consideration is, I believe, the poorest drawing card, and I think our monthly stipend is too high. Their salary certainly does not adequately compensate them for their services and is really meant merely for a little spending money; therefore I believe it would be better if we paid them less, for I have found they are more attentive to their duties when they are financially poor than when they have coin burning holes in their jeans. When they have money they need time off to spend it.

We maintain a rotation service, and each man is given service in each hospital department for a period of two months. It has been our aim to offer them every assistance to acquire a good practical training. We have even made arrangements so that our men can take the course of Surgical Technic at Chicago at no expense to themselves other than for transportation. I believe this course in dog surgery which is offered has been quite a drawing card.

Our services are so arranged that interns are received on June 13, 14, 15, July 1, Oct. 1, and Jan. 1. This arrangement is quite satisfactory because we do not have an entirely new crew to break in at one time, and the new man has been absorbed into our routine before the next man arrives. Thus we always have an experienced intern to break in the new arrivals.

We are lacking in one essential in our organization which I think would be of inestimable value to it, viz., a chief resident medical man, who would always be on duty and thereby more closely correlate the interns' activities. We have considered this idea but thus far have not put it into practice.

Perhaps I have made it appear that we coddle our interns. This is not true. We treat them all as gentlemen, and if you should find one that is not a gentleman there is only one way to handle him and that is to dispense with his services "pronto." If he has not acquired gentlemanly traits by the time he arrives at

your doors, you will be unable to teach them to him, at least we have been unable to do so, for we have tried it, and failed. Get rid of your disturbing factor in your service at once, regardless of how badly in need of his services you may be, for he will surely shoot your morale to fragments, and this loss of esprit de corps is the worst thing that can happen to your organization. These young men are of course still men in the making, in the formative age, and do not have that staid equilibrium which is acquired only by ageing. Many of their petty faults are best overlooked. Don't ride them too hard, for nearly all of them have more worthy traits than faults. There is one thing, however, which we rigidly enforce, i. e., we prohibit fraternization with the nursing staff. To control it you must also have the cooperation of the nursing supervisor. We control it within the hospital walls but I believe I am safe in saying that it is difficult to control when out of your confines; I was an intern myself and speak from personal experience on this point.

Another disturbing factor we have had to curb is that various staff members assume the authority to chastise the intern for some misdemeanor, either actual or fanciful. We now insist that when such occurrences arise they shall be reported to the individual responsible for intern activities. Many times upon investigating these issues we have found that the interns were not at fault. To have someone constantly nagging at them puts a damper upon their ardor.

Methods of Teaching in Schools of Nursing

By a Sister of Charity of Providence

The Selection of Textbooks

THE textbooks for nurses, like other technical books, came into being when the profession had reached a stage of development where it realized that it had something to contribute to further progress. The profession then decided that its members who had passed through every phase of nursing education had a more complete understanding of the problems of the student nurse than those less intimately connected with the work. As a consequence, the early textbooks for nurses came from the pen of members of the profession; some of whom were qualified and some unqualified to assume such a responsibility.

These books served to supplement the doctor's lectures and established a need for such material as was found in them. They also provided an incentive for further progress in the production of such books, so that with the various educational reforms concerned with schools of nursing, came rapid progress in the making and the marketing of textbooks for nurses.

Ideals in nursing education, as well as in other forms of education, are constantly changing. Modes of nursing procedure, considered of major importance in one generation, sink into insignificance in another. This necessitates a change in subject matter and methods of treatment. The old order of books is passing—new types of texts are coming into use with the gradual evolution of new theories of instruction and new ways of carrying out procedures.

The great increase of technical books on the subject of nursing might seem to indicate an increased emphasis on the textbook in the schools of nursing today. But, as in other institutions of learning, it has had the opposite effect. The multiplication of books has increased the dissemination of knowledge, and it has given students a broader point of view. Those who read widely are not content to accept the statement of one authority; thus, the appearance of a large number of books, together with a changed ideal of nursing procedure, has placed the center of gravity outside the limits of any particular book. "Many textbooks" has meant "better textbooks" because of a more critical and independent attitude toward the books.

The Teaching Value of the Textbook

Absolute dependence on the textbook is in some degree a reflection upon the teacher. The teacher is supposed to have mastered the subject she teaches, but, notwithstanding, the textbook is an aid to instruction, because it is a convenient means for having at hand necessary data. This is very important in the school of nursing, where the student nurse is forced to get command of the essential subject matter with the greatest possible economy of time, in order to secure a proper balance between her work in the classroom and her work in the hospital ward or in the clinic. There is a wealth of experience to be assimilated in all these departments, if the student nurse realizes their relative value in the process of her education.

The inexperienced teacher who approaches a subject of study finds grave difficulty in organizing it in a logical way, the textbook removes this difficulty in presenting a definite organization of material.

The textbook is also valuable to the teacher because it furnishes her the means of selecting pertinent subject matter. Authors usually sift out the nonessentials and deal with the essentials in the subject they treat. It is always true, that the student does not get an exhaustive treatment of the subject but she does get the topics or the points of view of topics and problems that to the author seem of most worth.

The textbook presents a better basis for organization than could be expected from the average teacher. The teacher at best is not a specialist. Authors of textbooks must have a large experience in the field in which they write. They must understand the development of the subject: its history, the changes through which it has passed in the process of development, and the place

that the subject occupies in the general field of knowledge. They have frequently tested the organization of the subject matter in the classroom or at the bedside or invited others to do so, before putting it into final form.

The textbook provides a good summary of the entire subject under consideration, as well as an outline or guide to the amount of material a student should cover in a given subject. It is also useful as a reference, but other books of reference will be necessary to furnish the details which are impossible in the limited number of pages allowed to the text.

Foster says, in writing on the value of the textbook, "As a source of information in instruction the textbook has three advantages. First, it represents a higher quality of presentation and exposition than that of which the average teacher is capable, so that when her own exposition proves inadequate or she wishes to follow it up with one which is better as a final form, recourse to the textbook is occasionally of real service. A second advantage lies in the fact that the material of the text is available for reference for the student, when, in his study, he seeks to recall the material developed in the classroom. What the teacher tells is told but once; what the textbook tells is accessible at will. The third advantage is derived from the appeal to the visual as well as the auditory. What one sees on the printed page comes into consciousness by different avenues of entrance, the eye rather than the ear, thus deepening the impression, especially in the case of visually minded students."

Some Words of Warning to the Teacher

While all educators agree that the text has its place in the art of teaching, still, we must admit that there are teachers of poor attainments and low ideals of their profession who supply their students with textbooks in various subjects and use these textbooks as the authority. Such teachers save themselves a great deal of lesson preparation and depend entirely on the textbook for the information the students have to acquire. The textbook here replaces the teacher, she is simply an expounder of the material found there. The real teacher, instead of taking the book and talking around it, deals with the subject itself and falls back upon the book to supply illustrative matter. The teacher must, above everything, see that the subject is treated in such a way as to meet the special needs of the students; she must mediate between the textbook and her pupils. In the hands of a good teacher the function of the textbook is to secure a careful preparation and steady revision. The poorest teacher of all is the one who does nothing more than prescribe a certain portion of the textbook to be prepared for each day's lesson and in the class hour finds out by question whether the student has learned the portion assigned.

Too frequently there are found in schools of nursing students who seem to feel that they must try to gather all of the knowledge, or rather the words, of one author only, and that, the author of their text. These students read one book and as a result believe one theory. They are not the least troubled if another author gives a different point of view, they will not dispute with the author of their text, not even question him.

The inadequate teaching staff of our schools of nursing increases the importance of the textbook; the more poorly equipped the teacher is the more she is dependent on the textbook for guidance in scholarship and method of instruction.

Two Factors Influencing Teaching

The professional training of the teacher and the effectiveness of the textbook used by the students have the most direct influence upon the success of teaching in the average school of nursing. About the importance of well-trained teachers there is no need to argue. It has never required proof. Our big problem is, to recruit such teachers for our schools of nursing. But the importance of excellent textbooks does need emphasis. The multiplicity of the textbooks for nurses that are now on the market makes it very imperative that leaders in nursing education should realize their responsibility for the proper selection of these books.

Standards for Selection of Texts

The prestige of the author has been a stock argument for the adoption of a textbook in some schools and in some states. That an author may be a scholar does not always mean that he or she can write a book that will meet the needs of student nurses. The author may see a subject in a large way, may be an investigator in a particular field of nursing, yet even these facts do not mean that he or she can write a satisfactory treatise to be used as a textbook in a school of nursing. The mere fact that one is an authority may be a handicap in writing a suitable book for the beginner. The prestige of the author is not a valid reason for selecting a text written by him for students, unless he is equally interested in adapting the material to the needs of the student for whom the text is prepared. It has been said that the best textbook of the generation represents the union of two elements—a proper knowledge of the subject and a proper knowledge of the mind of the student.

The prestige of the publisher is another standard by which textbooks are frequently valued. This factor should receive a certain amount of consideration but it should not be a fundamental factor. To be sure, a school needs to guard against an irresponsible publisher just as it does against an irresponsible banker. The mere fact that a company has an excellent financial standing, that its imprint represents character, that it publishes many books, and that all its books are carefully edited, does not mean that it publishes necessarily the best history of nursing, or the best text on anatomy and physiology or bacteriology for schools of nursing. Persons whose work it is to select suitable texts should be in touch with all publishers who have the reputation of putting desirable books of nursing on the market.

The efficiency of the sales force will always be a factor in the selection of textbooks just as it is, for instance, in the selection of automobiles. The man who has the ability to secure and hold the attention of his customer, presenting his goods in a pleasing, courteous manner, emphasizing the strong points together with the reasons for them, will secure business. These men understanding human nature and the psychology of salesmanship, know when to press a point and when to retire. One should have an independent attitude, should investigate the merits of the books and select the one that one would have selected had no agent presented the excellent features of his books.

The general appearance of the book is another factor in the selection of texts. One needs to be careful that the appearance does not influence one's opinion as to the merits of the material which the book contains. General appearance is important but one should guard against giving it undue importance.

The wide use of the text has a far-reaching influence on the choice of texts in our schools of nursing. Book companies make this argument very prominent when they are pushing the sale of a book.

These are all unintelligent methods of selecting textbooks; it is very evident that the choice should not be based on the prestige of the author or publisher, the suavity of the salesman, the general appearance of the book, its wide use, nor its low cost. These are minor elements; the sole test should be the adaptability of the text to meet the need of the student here and now. The textbook should fit the student who is to use it. The author should recognize the distinction between presenting the matter from the point of view of the person who knows it all already and from the point of view of the person who is making her first approach to the subject.

Hints on Selection of Textbooks

Attention should first be given to the content and organization of a textbook. A book fulfills its purpose through its content, and an effective organization of its content will make its purpose clear. The purpose of the author is frequently indicated by his statement in the preface; thus, the purpose of Kimber and Gray's Anatomy and Physiology is clearly set forth in one sentence in the preface of one of the editions of that book, "To describe in as simple a manner as possible the phenomena of life, and the principal conclusions which have been reached as to their interdependence and causes." A further analysis of the book would show whether or not the authors realized what they undertook to do in a way that is satisfactory to the student as well as to the author.

A textbook should be examined from the standpoint of accuracy and reliability of material. One should note carefully whether the statements the author makes are based on sufficient experience or knowledge enough to make the statement trustworthy. In an earlier edition of one of the popular texts on dietetics the author suggested that a typhoid-fever patient, who had been given a strictly liquid diet all through the acute stage, be allowed to chew a piece of steak on the third day that he carried a normal temperature. It is very evident that this author was quite ignorant of the patient's craving for solid food at this stage and the temptation in which she was placing the patient to swallow the meat to which he would undoubtedly succumb, or of the serious results that might follow.

The text must be free from bias and dogmatism. It is easy for an historian, for example, who has religious or political prejudices, to discuss the progress of nursing in such a way that only one-half the truth is given.

Relative values in subject matter must receive consideration. An author may be so interested in one subject and so imbued with the idea of its importance, as to over emphasize it in his text. Anatomists may emphasize the structure of the body so as entirely to overlook its functions and the laws of hygiene.

The amount of material in the textbook needs to be checked very carefully. Many texts are too detailed and others are too meager. The amount of material needed in the text will depend, to a great degree, upon how many texts are used on one subject.

One striking difference between the texts of today and those of a few years ago is the present great use of illustrations. These are very necessary to secure attention, to arouse interest, and to make the subject clear.

It adds to the value of the text to include certain helps, e. g., an index, selected lists of references, charts, diagrams, and suggestions for methods of teaching or of studying the book.

The date of copyright should be taken into consideration. Our schools of nursing are going through a period of rapid educational progress, and textbooks in many subjects soon become obsolete unless kept up to date by revision.

The mechanical construction of a textbook is also very important from a psychological point of view. We form a judgment of a book when we first look at it. A book that is well bound has a distinction that gives it a certain prestige.

The material out of which the book is made should receive considerable attention. Textbooks are made for hard and constant usage, and if the material is poor and inferior in quality the life of the book is correspondingly short.

The type used in printing textbooks is receiving more attention today than heretofore. There have been a few scientific investigations of the size of type and length of line that is most easily read and causes the least eye strain. The paper is of no less importance.

The size of the book frequently has a psychological influence on the student. In general, the mechanical make-up of the book should be such as to have a direct appeal for the student.

The proper selection of textbooks, according to many authorities, should fall under four large headings: Publication, mechanical structure, content, and use.

Publication

Author: Reputation, authority, other writings.
Publisher: Reputation, general experience, experience in this field.
Date of Copyright: First edition, revised edition.

Mechanical Structure

Size: Size of pages, number of pages.
Shape.
Binding: Durability, attractiveness.
Paper: Plain, gloss, dull; fiber—heavy, thin.
Type: Kind, size.
Spacing: Letters, words, lines, paragraph.
Width of margins.

Content

Attitude: Knowledge as an end in itself, value of knowledge found in its application.
Meeting the needs of student.
Purpose of the author: Indicated by preface, developed in the book, consistent point of view.
Exact scholarship.
Vocabulary: Within the comprehension of student, new words introduced gradually.
Style: Clear, lucid.
Treatment of topics in proportion to their importance.
Provision for motivation.
General treatment of subject.
Particular treatment of subject.
Organization.
Aids in use: Index, table of contents.
References: Selection, representative, valueless.
Illustrations: Representative, clear, purposeful.
Suggestions: To teacher, to student, questions.

Use

Adapted to the requirements.
Basic text.
Supplementary.
Reference.
Source material.
Teacher's reference.

Before leaving the question of textbooks it is worth while to combat a popular view that a text has served its purpose when it has given up its information to the reader. Some students have the habit of disposing of their used texts. Old texts become antiquated, it is true, but nevertheless, the textbook in which one has studied a subject has special value; one has a greater familiarity with that textbook and one will rarely go to another with the same degree of interest; one knows one's way about in it and consequently the information can be secured with the least expenditure of time. The book represents a certain amount of intellectual paid-up capital, that is squandered if one parts with it. One's old textbooks supply in the most effective way a record of one's intellectual experience and they should not be sold or discarded, on the contrary they should be treasured as one might treasure an old friend.

Correlation of Classroom and Bedside Teaching of The Student Nurse[1]

Ven. Sister M. Florina, R.N., Directress of Nurses, St. Margaret Hospital, Hammond, Ind.

PAPERS have been written and discussions held on the subject of "Correlation of Classroom and Bedside Teaching of the Student Nurse." It is a problem of the greatest importance and one that needs timely consideration from every angle. The work of the professional nurse is practically the same in all the states of the union, and it would seem to be perfectly evident that the training which is to guarantee a certain acceptable measure of competence, should follow somewhat similar lines, whether the nurse is trained in California or New York, and whether the training is given in a small or a large hospital.

The education of pupil nurses thus constitutes an ever open question because of its vital importance to the large as well as the small hospital. The point never to be lost sight of is that the patient makes the hospital necessary in any community, and the problems of caring for patients is the first duty of the hospital superintendent. Assigning a student to duty in a ward does not necessarily guarantee an education for her in that kind of work. However, the value of ward experience to a nurse depends upon several factors: First, the characteristics of the service itself, second, the abilities and attitudes of the student, and third, the influence of those in charge of the students.

It is a principle of vocational education that theory is most effective when given simultaneously with its related practice. Lectures which come before the practical work are often forgotten because they lack the associations and practical application which that experience gives. In some nursing schools it is not possible to give all the students their lecture courses while they are receiving their practical work in the wards. However, fortunately, the majority of schools today are equipped to give their theory and practice simultaneously, thereby helping the student nurse to recall points which might otherwise seem trivial and of no great importance.

The opportunity to correlate theory and practice in ward teaching is unique. Nurses are familiar with the technic of nursing and nursing procedure as previously received in the demonstration room, but they do not always recognize the basic principles underlying it. Application of the principles of materia medica to actual medicine giving, of industrial hygiene to lead poisoning, of cardiac diseases to cardiac nursing, could all be made at the best psychological time, namely, when the student is nursing these patients. Ward clinics of interesting cases conducted by the attending physician will give the student nurse a broader view and more scientific understanding which perhaps would not be received by theory alone.

I believe that superintendents, instructors, and floor supervisors should have special training—they must be executives and teachers as well as nurses. Especially is this necessary on the floors and in the wards. It is necessary that the floor supervisors be able to go into the ward with the student nurse, explaining in a concise manner the practical procedure and giving all the moral support in order to overcome the timidity of

[1]Read at the meeting of the Indiana State League of Nursing Education at Mercy Hospital, Gary, Ind., March 19, 1927.

one who is perhaps for the first time giving some special treatment. The demonstration-room classes cannot give the confidence which is needed when the student nurse is asked to do the same on the floor or in the wards.

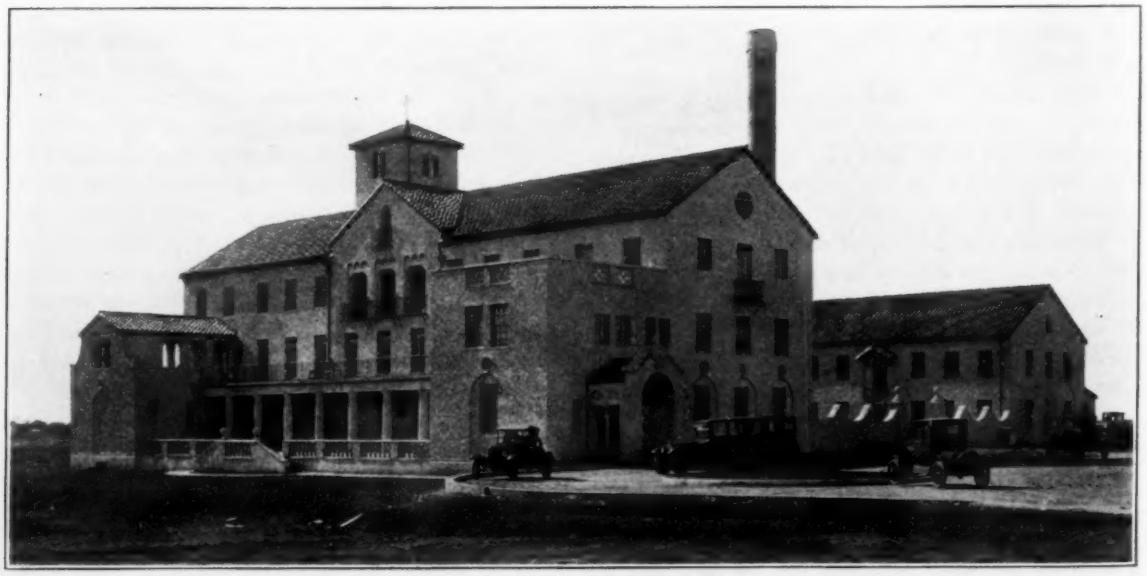
We are all acquainted with the medical students who come to our hospitals to serve an internship. When first they are asked to do some practical work in the wards or assist in surgery they are at a loss as to what should be done. They have no confidence because they have had no practical experience. In theory they are good but what is theory without practical experience.

During the last few years we have read much and heard a great deal of the university hospital nursing schools. These schools are trying out the method of giving theory first and then practical work later. To date this cannot be taken as a standard and no definite information concerning results can be given as the university schools are still in the embryonic stage, and therefore time must be allowed for determining definitely whether the correlation of classroom and bedside nursing as given in the majority of the schools today, or the method of giving theory first and practical ward work later on, meets the public demand for efficient nurses. We have come to realize that nursing is in a very special sense a national service, and that the training of a nurse is a matter of vital importance, not only to her hospital and to herself, but to the country at large. It is not enough that she should serve the needs of a single institution or of a limited group of people. She must be ready to serve the whole community and to meet the conditions as she finds them in many different kinds of communities. The training that can meet the above demands is the training that should be standardized and set up for universal adoption.

The New Ponca City Hospital, Ponca City, Okla.

A MESS of buildings—a drab wooden one, a red brick one, and perhaps an old house or two; so are many hospitals. They belong together because they're on the same lot. Occasionally the buildings are garnished with a bit of trees and shrubbery. But often the garnish is missing and the effect is as shocking as a cancer in a glass jar. The mixture of ether, cooking, and some other odors that assail one on entering—clearly define this kind of hospital even though night had softened the harsh elements of the exterior. If the nose, perchance, doesn't tell the story quickly enough, the eyes do for one is thrust directly into a barren corridor or lobby the like of which can be found only in such hospitals. And then, if we remain long enough, another of our senses is defied for we notice that it is noisy. It unnerves us whether we are visitor or patient. But in Ponca City there is a hospital that does not look, smell, or sound like this repellent thing many of us call hospital. It is the Ponca City Hospital operated by the Sisters of St. Joseph (of Wichita, Kansas).

It doesn't look like a hospital (see photo). It is too large for anything but the largest of homes—and yet it has a decidedly domestic quality. While the basis of the design is obviously Spanish, it has been adapted with freedom to meet the exacting needs of the hospital plan. The materials are a light colored (almost white) stucco, roughened sufficiently to give an interesting texture to the surface, stone trim, a ruddy tile roof with



PONCA CITY HOSPITAL, PONCA CITY, OKLA.
Schmidt, Garden & Erikson, Architects, Chicago, Ill.

variations running from orange through the reds and into the deep bluish purples, iron work painted black, with window sash and frames gray.

Add these notes of the material to the photographs and the building will be readily visualized. At any rate, its broad veranda, its interesting outline, and its pleasant color make it an inviting place, a place to which one would like to go.

Unfortunately at the time these pictures were taken the planting had just been begun. The hospital is set in the midst of a ten-acre park, the portion nearest the street intersections being, in fact, a park owned by the city. All of this was provided by the far-seeing vision of the donors of the hospital. Try to picture this building ten years hence if you will, when instead of being on a raw prairie its beauty is enhanced by a park in the foreground with shrubbery and trees casting their dancing shadows over the stucco.

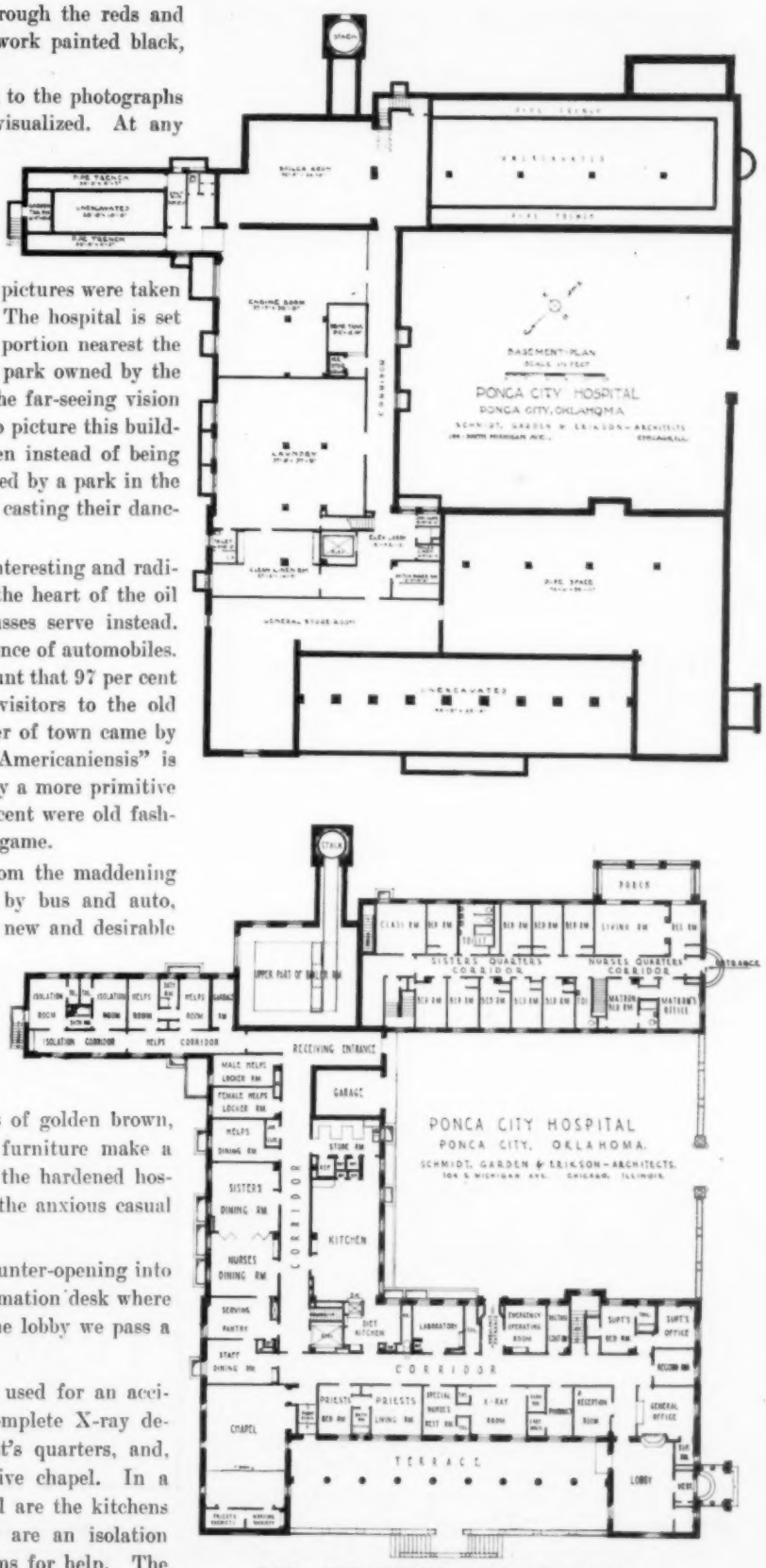
The location of the hospital is interesting and radical—but logical. Ponca City is in the heart of the oil country. It has no street cars—busses serve instead. This accounts perhaps for the prevalence of automobiles. At any rate it was found by actual count that 97 per cent (or some such percentage) of the visitors to the old frame hospital located near the center of town came by auto. Evidently the "genus homo Americaniensis" is rapidly forgetting how to locomote by a more primitive method. Presumably the three per cent were old fashioned or hadn't had their daily polo game.

The hospital site is then far from the maddening crowd, yet readily available to all by bus and auto, quietly located on the far edge of a new and desirable residential section.

And the impression gained from the outside is furthered upon entering. Through the entrance porch and the small vestibule the visitor enters the lobby. The rough-textured plaster walls in tones of golden brown, the bright draperies and attractive furniture make a reception which pleasantly surprises the hardened hospital visitor and cheers the heart of the anxious casual one.

To the right as one enters is a counter-opening into the business office. Here is the information desk where no one can miss it. After leaving the lobby we pass a small reception room on the left.

The balance of the first floor is used for an accident-receiving room, pharmacy, a complete X-ray department, physiotherapy room, priest's quarters, and, at the far end, a small but attractive chapel. In a separate wing from the main hospital are the kitchens and diningrooms. In another wing are an isolation unit for suspected cases and two rooms for help. The nurses and Sisters' quarters are connected directly with



PONCA CITY HOSPITAL, PONCA CITY, OKLA.
Above: Basement; Below: First Floor.
Schmidt, Garden & Erikson, Architects, Chicago, Ill.

the hospital on the first floor, though they are in a separate building which is described below.

The front portion of the second floor is entirely given over to patients, single and two-bed rooms predominating. There are a few rooms with bath or toilets. But the most interesting features of this floor are the maternity and nursery departments. Here one may see—but not touch—twelve to fifteen babes without endangering them. Glass partitions separate them from the visitor. Adjoining these, is a birth room equipped to provide the best of care for the mothers during that trying period.

The three operating rooms are segregated in a separate wing on this floor. With their ample light and a soft-gray tile wainscoting they are not chambers of horror but quite pleasant if one can but forget the serious work that goes on there. The sterilizers—one of the important links in the chain which makes modern surgery possible—are of the latest type—built into the wall. An ample workroom for the preparation of bandages, etc., is provided in the operating suite. So, too, are a utility and a scrub-up room.

The entire third floor is used for patients in one-, two-, and six-bed rooms.

In addition to a few private toilets there are, of course, the usual general toilets and baths on each floor used by patients. A utility room, or as it might be more properly called, nurses' workroom, and a pantry for nourishment preparation and food distribution are necessities that are also provided and most completely equipped. Those important accessories of every good residence—the broom or janitor's closets—are numerous and well located. Instead of the usual slop sinks, these are of terrazzo designed to accommodate the newer forms of scrubbing equipment as well as the prehistoric pail and mop.

The nurses' station on each patient's floor deserves more than passing mention. This is the administrative center of the floor. Adjacent are a medicine case with a sink and running water, the Sister supervisor's office, and nurses' toilet. Nearby are the other working units—the utility room and floor pantry.

Both covered porches and open-air terraces on the second and third floors insure that the patient will have the opportunity to make the most of the pleasant days. When it is too hot to be in the sun then the shelter of the porches may be enjoyed.

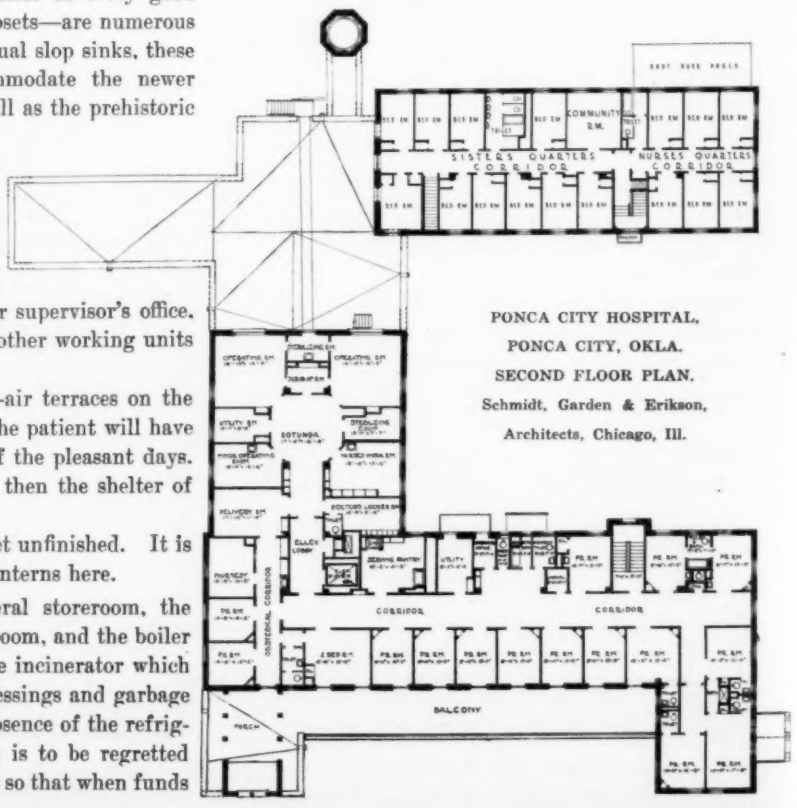
The fourth floor or attic is as yet unfinished. It is planned to provide housing for two interns here.

The basement contains a general storeroom, the linen room, the laundry, the engine room, and the boiler room, all well lighted and airy. The incinerator which literally "eats up" all the refuse—dressings and garbage and tin cans—is found here. The absence of the refrigerating machine in the engine room is to be regretted but all provision has been made for it so that when funds are available it can be installed with a minimum of expense.

The nurses' call system is of the silent type with special features. Pushing the button turns on a light over the patient's door and simultaneously one at the nurses' station, one in the utility room, and one in the pantry—in other words the nurse on duty cannot escape the insistent call of these lights if she would. She must go to the bedside of the patient calling her before she can reset the call.

The night light, a light set in the wall close to the floor with a reflector above to throw the light on the floor and controlled by a switch *outside* the door is another interesting device for the comfort of the very sick or restless one. It enables the nurse to enter a room and observe the patient without awakening him by the click of a switch and the bright glare of an ordinary light.

Each bed is provided with a plug for an examination or reading lamp, a bracket light at the bedside, an electric fan outlet on the wall, and a telephone in the private rooms. The hardware on the doors is especially designed for hospital use. There are no knobs on the doors to the patients' rooms. And no latches to be covered by a "husher." Instead the doors have a push plate on the corridor side and an arm hook on the room side. This arrangement permits the nurse to enter or leave the room carrying a tray or with both arms engaged without difficulty. A floor check holds the door open or firmly closed.



PONCA CITY HOSPITAL,
PONCA CITY, OKLA.
SECOND FLOOR PLAN.
Schmidt, Garden & Erikson,
Architects, Chicago, Ill.

PONCA CITY HOSPITAL, PONCA CITY, OKLA.

Superintendent's Room. St. Joseph's Chapel.
Sterilizing and Nurses' Work Room. Laboratory.
Record Room. Kitchen.

Schmidt, Garden & Erikson, Architects, Chicago, Ill.

The floors and base throughout are of terrazzo. The walls and ceilings are of plaster. The window stools are of terrazzo. There is no window trim and the door casings are of steel flush with the plaster.

Having thus hastily passed through the hospital, as we are ready to leave we wonder whether we really have been in a hospital. The air has always been fresh and sweet—never ether laden—never any reminder of to-day's luncheon or last night's supper. And if we are familiar with the modern fireproof hospital—we wonder why our nerves are so restful—why the corridors seem so quiet. If we have watched carefully we wonder what happens to our footfalls on the hard floor of the corridors. They seem to be muffled as though a blanket

were laid over them. The whole seems to assure one of quiet and sure efficiency, instead of the more commonly found bustling confusion.

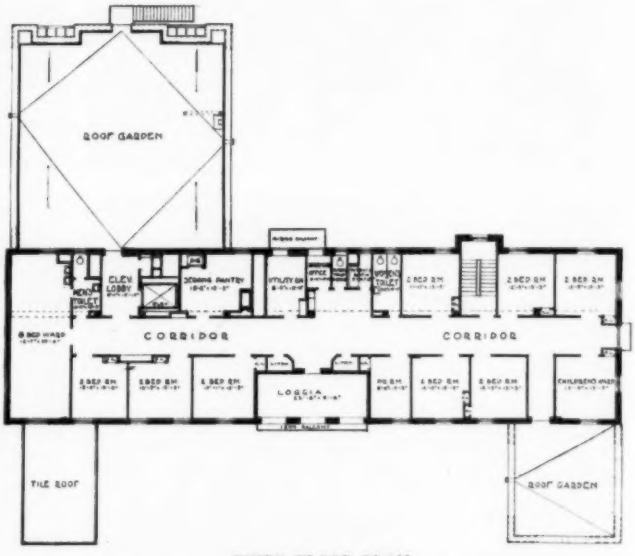
The explanation is found in the things that have been put into the building. A system of ducts attached to the fans located in the attics removes odors at their source—the kitchen, the laundries, the toilet rooms, etc. The result is an odorless hospital.

The explanation of the quietness is equally simple. The hard plaster walls and floors are among the best of sound reflectors. To overcome this a sound absorbing material has been introduced in the ceiling to counteract the effects of these reflected sounds.

As we approach the main entrance we see two parallel wings—the nearest of these is the hospital, the other is the Marland wing or nurses' home. They are connected at the front by the low wall and at the rear they are connected directly with one another.

The space between the two buildings is a receiving court. From it opens the ambulance entrance on one side—and on the second side the goods-receiving entrance and the garage.

The Marland wing is a two-story building divided into two sections, the entire first floor and part of the second being for nurses, the rest for Sisters.



THIRD FLOOR PLAN.
PONCA CITY HOSPITAL, PONCA CITY, OKLA.
Schmidt, Garden & Erikson, Architects, Chicago, Ill.

To the right of the public entrance of the Marland wing or nurses' home is a reception room for guests of the nurses. Adjoining it is a pleasant living room and a large porch.

To the left is the office of the Sister or matron in charge of the building, and a room and bath for her use. The nurses are all housed in single rooms, small but with a large closet. On the second floor, reached by a separate stairway, are the Sisters' quarters, each with her individual cell and a small community room. The finish in this building is much like that of the hospital in its essentials.

All buildings are of fireproof construction and of the best of materials everywhere.

OPERATING ROOM, PONCA CITY HOSPITAL, PONCA CITY, OKLA.
Schmidt, Garden & Erikson, Architects, Chicago, Ill.

There may be a few of the captious who will criticize the hospital as being extravagant—too good for the location. The answer is a simple one: Is anything too good if it aids in a small measure in the recovery of the patients? If the hospital is attractive to the eye it helps to create that confidence which is an important element in recovery. Does the removal of odors pay? Ask the patient with no appetite. Does quietness pay? Ask the patient who has been in one of the other types of hospitals. Does decent housing for Sisters and nurses pay? Ask those who have tried to render cheerful service to the sick after a night in overcrowded rooms in the basement or attic.

To ask these questions is but to answer them. What the people of the community think of it is indicated by their use of the hospital during the short time it has been opened. It has been filled to over 100 per

cent of capacity ever since the building was opened—rooms intended for private rooms are now two-bed wards.

The building is already outgrown—though its capacity is more than 175 per cent of the capacity of the building it replaced. But this expansion is provided for; all of the auxiliary departments such as kitchens, operating rooms, etc., are large enough for a 100- to 125-bed hospital. Additional patients' rooms may be added at a very low cost per bed and without any radical alterations in the present building for that has all been arranged for in the plans.

The building committee, Wm. H. McFadden, J. S. Alcorn, and H. A. Cragin, and Mother Aloysia and Sister Lawrence, and the architects, Smith, Garden, and Erikson, all have contributed to make this a hospital in which all of the five senses are respected. It is a hospital that the patient enters with confidence that the utmost that physical equipment can offer is at hand and one where the personnel is properly housed, insuring cheerful and efficient service.

Meeting of the Pennsylvania Conference of the Catholic Hospital Assocition

THE Sixth Annual Conference of the Catholic Hospital Association of Pennsylvania proved a very interesting and successful one, and the many Sisters who attended expressed themselves very pleased with the Conference and its results. The sessions were held at Hotel Casey and Mercy Hospital, Scranton, on Tuesday, April 19, the first day of the Conference, while on the second day, after a pleasant automobile ride to Misericordia College, Dallas, Pa., the delegates were hospitably entertained there by the Sisters and the students. The program of the Conference is as follows. The papers read at the Conference were given to Father Garesché for publication in HOSPITAL PROGRESS, where they will reach a still larger circle of readers. At the conclusion of the Conference a number of the Sisters took the train to Philadelphia, where they attended the sixth annual conference of the Hospital Association of Pennsylvania, held at Hotel Philadelphia, April 20, 21, and 22.

Program Sixth Annual Conference, The Catholic Hospital Association of Pennsylvania

April 19 and 20, 1927

Tuesday, April 19, 1927

7:30 a. m.: Holy Mass. Rev. J. J. Featherstone, J. C. L.
Diocesan Director of Schools, Scanton, Pa.

9:30 a. m.: Registration of Delegates.

10:00 a. m.: Opening of the Conference and Appointment of the Resolution Committee by the President.
Address of Welcome, Rev. J. S. Fagan
Diocesan Administrator
"The Function of the Catholic Hospital," Rev. D. J. Connor, S.T.L.
Scranton, Pa.

SISTER M. IRENAEUS, R.N., LAST YEAR'S PRESIDENT, AND SISTER M. REGINA, R.N., B.S., NEWLY ELECTED PRESIDENT OF THE PENNSYLVANIA CONFERENCE OF THE C. H. A., AT DALLAS, PA., APRIL 20, 1927.

"The Care of the Psycho-Neurotic Patient in the General Hospital," Sister M. Laurentine, R.N.
St. Francis Hospital, Pittsburgh, Pa.
"Organization of the Laboratory in the Small Hospital," Sister M. de Chantal, R.N.
Du Bois Hospital, Du Bois, Pa.

2:00 p. m.: "The Nurse and Social Personality," Rev. J. J. Featherstone, J.C.L.
Scranton, Pa.
"Endocrinology," M. J. Noone, M.D.
Scranton, Pa.
"The Lesson Plan," Sister M. Martina, R.N.
Mercy Hospital, Wilkes-Barre, Pa.
"Scholarships," Rev. E. F. Garesché, S.J.
Director of International Guild for Catholic Nurses, Milwaukee, Wisconsin
"Talk on Legislation," Sister M. Regina, R.N., B.S.
Mercy Hospital, Wilkes-Barre, Pa.
Election of Officers. All papers open to discussion from the floor.

7:30 p. m.: Round Table Conference, Sister M. Regina, R.N., B.S.
Mercy Hospital, Wilkes-Barre, Pa.
"Discipline in the Nurses Residence." Discussion led by Sister M. Etheldreda, R.N., M.A.
Mercy Hospital, Pittsburgh, Pa.

Wednesday, April 20, 1927

9:00 a. m. Automobile trip to College Misericordia, Dallas, Pa.

10:30 a. m.: "Keeping Religion in the Catholic Hospital," Rev. J. P. Boland, Ph.D., D.D., D.C.L.
Diocesan Director of Hospitals, Buffalo, N. Y.

PRESIDENT'S ADDRESS

Sister M. Irenaeus, Providence Hospital, Beaver Falls, Pennsylvania

IT HAS occurred to me that Providence has been most gracious in bringing us together at this particularly joyous season—the blessed Eastertide. It would seem that from this bright glad festival we are to secure added graces and favors, for the joy has been given to us to reflect and judge together as we look back upon the past, and to hearten one another as we gaze forward to the future.

Each passing year makes us realize more and more that no hospital is an isolated unit sufficient unto itself and independent of its neighbors; consequently we appreciate more deeply that each of our hospitals throughout the state inherits a whole wealth of previous experience and shares in the discoveries and developments made in other hospitals. We are all one family. Therefore, we hail the hour as most happy that brings us to greet one another, to consult with one another, to hope with one another, and all together pray. I know full well that you have many interesting and helpful matters to discuss so I am going to take very little of this valued time.

We are all vitally interested in the problem of nursing education—it is the live question of the hour. Judging from some articles in our hospital and nursing magazines one would be led to conclude that the nursing-education problem had very complicated and unusual angles. When

we analyze the points to the fundamentals, we find that nursing education is built upon the selfsame principles used in the education of other groups of professional people. We must use educational methods in our schools of nursing as they are used in other professional schools. Our problems are the same. We cannot train women for nursing any more than the medical school can train for medicine unless we have intelligent and willing students, proper teachers, and suitable equipment. Much is expected of the nurse who goes forth from the nursing school; more is demanded from her today by a restless, suffering world, than was looked for in the past, and the principles upon which the education of the young women who present themselves to our training classes are based, are the strong, sturdy principles that make it possible to see life steadily and see it whole. The principles that will enable the student to appreciate the inherent dignity of human personality though it may be dimmed by weariness and often hidden in misery and want, are the principles that must guide nursing education. These, added to the fundamentals of all professions, as I said before, must direct our work. We have no hidden complicated problems peculiar to nursing education.

Our modern mechanical era stresses equipment, statistics, and technic; so much so, that the individual and his personal dignity together with his consequent obligations and responsibilities are sometimes lost in a maze of uncertainties. Here we have a difficulty—not a problem—a difficulty in keeping before the student nurse the necessity of remembering that the human personality of those for whom they care must be kept above and beyond every other consideration.

The movement that is abroad at present with regard to interesting student nurses in continuing academic work and securing university degrees deserves our unquestioned interest. Of course, it does not follow that the university degree of itself will add to the capability of the young nurse—but if the student who desires to follow the nursing profession wishes, at the same time to have her work recognized by the university, and her hours of study credited by the institution as leading to the degree of Bachelor of Science, it is a matter of no little import to us. Much, I believe, will follow in the wake of this movement and the opportunity to affiliate the nursing school with the university should be the desire of every hospital. Recently the Duquesne University of Pittsburgh offered affiliation to the Catholic training schools of the city. It is understood, of course, that only graduates of a state-accredited four-year high-school course would be admitted to the university classes. The association might take action on this matter, and in so doing aid the individual hospitals.

We are all agreed that the numerous Catholic hospitals throughout our state make it almost imperative that there should be a Sister representative on the State Board of Examiners. The question seems vital, and I hope we may have some discussion on it.

Throughout the state, organizations are concerned with the grave question: The cost of private nursing. To the average family the cost of sickness becomes exorbitant if the services of a nurse are required. As a group of Catholic trainers of nurses we should give our best thought to this great economic question, securing if possible the interest of those able to carry on an organized effort to minimize the cost of sickness in the average home, and at the same time insure the graduate nurse an adequate income.

We have reason to be grateful for much as we glance back on the past; as we go onward we can be consoled that we are not alone. He who has called us together and placed before us these tasks is with us always and everywhere. In His fatherly keeping we may rest secure and bravely go forward to do His blessed work among mankind.

THE FUNCTION OF THE CATHOLIC HOSPITAL[1]

Rev. D. J. Connor, S.T.L., Scranton, Pa.

CHESTERTON some years back startled the practical-minded people of the day, who think that everything is important except a man's religious opinions, by declaring that the most important thing about any man is his view of the universe. "I think," he said, "that for a landlady considering a lodger, it is important to know his income, but still more important to know his philosophy. I think that for a general about to fight an enemy, it is important to know the enemy's numbers, but still more important to know the enemy's philosophy."

I confess that I am of much the same mind as Chesterton. Many a man who pooh-poohs philosophy in his declamatory moments is making a mess of raising a family because of some philosophic error that was rampant

[1]Read at the sixth annual meeting of the Pennsylvania Conference of the Catholic Hospital Association at Scranton, Pa., April 19, 1927.

A GROUP OF DELEGATES AT THE PENNSYLVANIA CONFERENCE OF THE CATHOLIC HOSPITAL ASSOCIATION AT DALLAS, PA,. APRIL 20, 1927.

in literature hundreds of years ago. Philosophy does not stand out visibly to the eye like the carved saints and angels on the front of a Gothic cathedral, but it enters into the structure of human life and institutions as inexorably as the law of the perpendicular enters into the construction of a wall. A skeptical mason may say that he does not believe in it, but it is stronger than he. He may even disregard it up to a certain point, but if he builds out of plumb, the moment will come when his wall totters and falls, and then the genius of the sculptors and glaziers who collaborated with him, and his own good intentions, only make the tragedy the more pitiful.

This example may be extreme, but it illustrates the point I am about to make, that people who have a definite philosophy of life have an immense advantage over people who have not, even when these latter are far cleverer and more enterprising. That is the advantage, it occurred to me when I was asked to speak on the subject of "The Catholic Hospital in the Community," that a religious institution has over some of its competitors in the field. Efficiency is the ideal which all the professions, even yours, today aim to attain, and sometimes you may be tempted to a feeling of futility and frustration at your inability to compete with certain other institutions along the lines where they approach so close to perfection. Personally, I think it would be a tremendous mistake to accept their point of view at the sacrifice of your own, even though eventually you were able to overtake or outstrip them. I think you should be alert, as I know you are, to study their methods and improvements, but I think it equally important for them to study the spirit and aims which you bring to the performance of your duties.

They say that the great preacher, Lacordaire, whose oratory had electrified thousands during his Lenten conferences in the Cathedral of Notre Dame, had the humility to sit for hours in the village church of Ars, and try to learn from the illiterate pastor, Jean Baptiste Vianney, the secret of converting souls and bringing them back to God. After all, why not? Converting souls is the real business of the preacher, not winning applause or tickling the emotions, but generally, success blinds men to the real purpose and end of their professions, and they try to make their own achievements and talents the measure of greatness for their profession as well as for themselves.

It would be too much to expect that every Lacordaire should have the humble wisdom to sit at the feet of a Cure of Ars, but it would be a great pity surely if the Cure of Ars took it into his head to rival Lacordaire and pine away because he could not hold audiences spellbound in Notre Dame. So with the Sisters who conduct hospitals. You originated hospitals. You, better than anyone else, know the purpose they subserve. You have the spirit with which your profession started and to which it must always come back for fresh inspiration, and your greatest service to humanity will always consist in remaining true to yourselves, in being just what you are, and representing Him whom you represent so well.

Personal Element Necessary

A great sportsman once said that, "'Tis not all of fishing to fish." Just so, 'tis not all of healing to heal. A hospital is considerably more than a field for surgical or medical skill. Yet take up the prospectus of some of the most celebrated institutions, and you find everything reduced to terms of sterilization, diagnosis, pathology, technic, percentage of deaths and recoveries. A man entering there ceases for the time being to be a man and becomes a pathological specimen, a surgical subject, a "case." For you, he is always primarily a human being, and I hope he always will be. He is a creature composed of soul as well as body. The hospital is for many patients the passage to

THE NEWLY ELECTED OFFICERS OF THE PENNSYLVANIA CONFERENCE OF THE CATHOLIC HOSPITAL ASSOCIATION, DALLAS, PA., APRIL 20, 1927.

health, but for many more it is the passage to eternity, and where your profession in general is qualified to deal only with the former eventuality, you are interested in both and who shall ever say, this side of the tomb, in which direction you are accomplishing the most good?

Is anyone bold enough to declare in so many words that a hospital is no place to prepare a man for eternity? The fact remains that for many poor creatures it *is* the preparation for eternity and nothing else. You do not think of his last journey simply as the undignified barrow-ride down to the morgue in the wee hours of the morning. You think of it rather as an immortal soul that is pluming itself for flight, of a brother that is starting out alone to an unknown land, of a creature that in a few hours is destined to meet its Creator and Judge, and hear from His lips words that will mean weal or woe for eternity.

I know that many persons will smile at this view of your profession. They will say: That may all be very well, but medicine and surgery have no interest or responsibility in it. This may be admitted, but it simply emphasizes the fact that the Christian hospital has a much broader responsibility to mankind than the medical profession. Newman pointed out years ago in one of his lectures on "The Idea of a University" (which, by the way, now that it is published in the Everyman's Library, should be the inseparable companion of every Catholic scholar), that a thing may be advisable medically and yet inadvisable or absolutely wrong in practice. Why? Because medicine and surgery as such consider man as an animal, whereas man is that but much more than that. It is the business of every specialty, he showed, to develop its own science to its ultimate logical conclusions. Of itself, it recognizes no limitations. Thus, the business of the doctor is to prolong man's health indefinitely and to forbid everything that might interfere with his health. But, as he pointed out further, "bodily health is not the only end of man, and the medical science is not the highest science of which he is the subject. Man has a moral and religious nature, as well as a physical. . . . And so what is true in medical science might in all cases be carried out, *were* man a mere animal or brute without a soul; but since he is a rational, responsible being, a thing may be ever so true in medicine, yet may be unlawful in fact, in consequence of the *higher* law of morals and religion having come to some different conclusions."

Efficiency With Christian Charity

A specialist is supreme only in his own particular field; the difficulties arise when a man becomes so engrossed in his specialty that he tries to make it exclude all other considerations. A doctor may explain to a Sister that she will contract yellow fever if she goes among the stricken, and he would be absolutely justified. But if he

forbade her to go, he would be wrong, because, besides her life, there are other factors in the case that enter into a perfect decision—her duty, her vows, the needs of her fellow-man. These are moral and religious considerations, and they must take precedence over the medical verdict. The Sister does not dispute the truth of the doctor's conclusions; she only denies the importance he attaches to them.

Permit me now to say a few words on a topic whose importance in this connection can hardly be exaggerated. I mean keeping up the spirit of your vocation. There was a time when hospital work attracted only those whom the Lord had endowed with an exceptional degree of generosity, sympathy, and self-sacrifice. But with the growth of the philanthropic sentiment and the convictions we have reached today about the value of public health as an investment, hospital work has become a profession and a business. Its standards are undoubtedly high, but it would be a very astounding thing if the spirit of professionalism did not creep in and tend to supplant spontaneous sympathy and personal zeal with the ideal of technical efficiency. Still, nothing is more forlorn or distressing to a human being than a hospital where the machinery of service works as smoothly and effectively as a modern printing press, but where the note of personal interest and sympathy is lacking and the sick man is treated as impersonally and dispassionately as if he were a geological specimen that had to be properly labeled and classified. There is no mistaking such an atmosphere when one gets into it, and it is difficult to define just what the single items of omission are, because the mechanism of attention leaves nothing to be desired. But the spirit that should animate these attentions is missing, and there is no substitute for the spirit of any art or profession. It is like hearing a masterpiece of Beethoven performed by someone who plays the notes faithfully but who lacks all musical feeling and power of interpretation. In a way nothing is wrong, but we feel that everything is wrong, because Beethoven's idea is not carried out. The purpose the masterpiece was intended to serve is defeated.

But will not professional zeal supply the place of human sympathy and fellow-feeling? No, nor even enthusiasm for humanity in general. There are many geniuses who spend themselves unstintedly in philanthropic causes who have yet no interest whatever in the individual, the son of Adam, the brother of Christ. In reading Dostoevsky's great novel "The Brothers Karamazov" some time ago, I came across a statement of this anomalous condition of psychology that to me was very striking and, as I say, is often met with in real life. It is an eminent doctor who is speaking. "I love humanity," he said, "but I wonder at myself. The more I love humanity in general, the less I love man in particular. In my dreams I have often come to making enthusiastic schemes for the service of humanity, and perhaps I might actually have faced crucifixion if it had been suddenly necessary; and yet I am incapable of living in the same room with anyone for two days together. As soon as anyone is near me, his personality disturbs my self-complacency and restricts my freedom. In twenty-four hours I begin to hate the best of men. But it has always happened that the more I detest men individually, the more ardent becomes my love for humanity."

See Christ in the Patient

The true fraternal feeling is the love not only of mankind as an abstraction but of the individual—the hopeless drunkard, the mishapen infant, the dying prostitute. That is the sentiment that inspired men to found hospitals, and it is to that we must go back for inspiration—the love that sees Christ in each member of the race.

There is a story told of St. Elizabeth of Hungary by Count Montalembert which illustrates graphically the point of view of those who first saw the need of hospitals and the incentive that spurred them on to work. Let me quote the story in his own words. It will not only make an effective ending, but it will summarize perfectly the spirit which the hospital and nursing profession essentially typify.

"Amongst the sick there was a poor little leper named Helias, whose condition was so deplorable that no one would take charge of him. Elizabeth, seeing him thus abandoned by all, felt herself bound to do more for him than for any other; she took and bathed him herself, anointed him with a healing balm, and then laid him in the bed, even that which she shared with her royal husband. Now, it happened that the Duke returned to the castle whilst Elizabeth was thus occupied. His mother ran out immediately to meet him, and when he alighted, she said: 'Come with me, dear son, and I will show thee a pretty doing of thy Elizabeth.' 'What does this mean?' said the Duke. 'Only come,' said she, 'and thou wilt see one she loves much better than thee.' Then, taking him by the hand, she led him to the chamber and to his bed, and said to him: 'Now look, dear son. Thy wife puts lepers in thy bed without my being able to prevent her. She wishes to give thee the leprosy; thou seest it thyself.' On hearing these words the Duke could not repress a certain degree of irritation, and he quickly raised the coverings of the bed; but at the same moment, according to the beautiful expression of the historian, 'The Most High unsealed the eyes of his soul, and in place of the leper, he saw the figure of Jesus Christ crucified extended on his bed.' At this sight he remained motionless, as did his mother, and began to shed abundant tears without being able at first to utter a word. Then turning around, he saw his wife, who had gently followed, in order to calm his wrath against the leper. 'Elizabeth,' said he, 'my dear good sister, I pray thee often to give my bed such guests. I shall always thank thee for this, and be not hindered by anyone in future in the exercise of thy virtues.'"

THE THERAPEUTIC APPLICATION OF ORGANOTHERAPY[1]

M. J. Noone, M.D., Scranton, Pa.

A LITTLE over two decades have elapsed since the first edition of "Organotherapy" appeared in this country, though considerable study had been given to this subject in Europe. At the present time, there is no doubt that organotherapy is being used to an unjustifiable degree and in a very indiscriminating and irrational manner. However, progress is being rapidly made; and ere long, no doubt, the administration of most of the organic preparations will be along scientific rather than empiric lines.

Organotherapy has made its greatest advancement in the treatment of diabetic, gynecological, and obstetrical conditions. In connection with this statement, I might also mention the wonderful work, with splendid results, accomplished by Marine in the prevention of simple goiter during the adolescent period.

Treatment of Diabetes

The medical treatment of diabetes since the introduction of insulin is too well known to give it any mention at this time. The preparation and management of the surgical diabetic is the condition upon which I wish to lay stress. To treat the surgical diabetic patient without the use of insulin and glucose recalls the troubles and dangers which we encountered when treating our severe goiter cases previous to the introduction of Lugol's solution. The surgical diabetic condition is one which must be managed

[1]Read at the sixth annual meeting of the Pennsylvania Conference of the Catholic Hospital Association at Scranton, Pa., April 19, 1927.

with the cooperation of the surgeon and the internist, because without this cooperation the greatest contraindication to surgical procedure presents itself. The thorough preparation of a patient includes the following:

1. Three days prior to operation the carbohydrate content of the diet is increased to at least one hundred (100) grams. The fat is kept low. The insulin is increased, if this is found necessary to keep the plasma sugar normal.

2. The hour of operation should be in the morning.

3. At 6. A. M. the carbohydrate content of the usual breakfast plus ten (10) grams is given in glucose or orange juice. The usual morning insulin is given at the same time. Fluids are administered in liberal quantities to within an hour of time of operation.

4. Simple enema at 7:30 A. M.

5. According to Duncan and Frost, before the patient goes to the operating room, a blood specimen is taken for sugar, acetone, and plasma bicarbonate determination. Insulin is given at this time, the dose varying from 10 to 20 units. The smaller dose is employed in under-nourished subjects, the larger dose to the robust and the well nourished.

6. Before leaving the operating room, 30 to 40 grams glucose are given intravenously.

7. Upon returning to the ward, 20 to 30 units of insulin are administered, consideration again being given to the physical status of the patient.

8. Two hours later, a blood specimen is taken for carbon-dioxide-combining power, acetone, and sugar estimation. Based on these analyses, insulin and carbohydrates are given.

The solution used is a 5- to 10-per cent glucose, given at or slightly above body temperature and from five hundred (500) to one thousand (1,000) c.c. are given. One unit of insulin is given for every two grams of glucose. The total amount of insulin to be given should be divided into two equal doses; one-half given five minutes after the beginning of the glucose administration and the remainder at the end of the administration. If the above instructions are carried out, the patient may be carried through the operative procedure and post-operative stage without the occurrence of acidosis.

Post-Operative Acidosis

According to Fisher and Mensing, the same procedure has proved valuable in the treatment of post-operative acidosis (nondiabetic), and surgical shock. In shock, as in nearly all abnormal conditions, we have a state of perverted body metabolism. The entire system is in a state of exhaustion, and to overcome this, a source of energy is needed which will readily give up energy to the dying cells. Glucose, administered alone, will not do this. We know definitely, from the splendid work carried out by Renger, that insulin oxidizes glucose, hence the introduction of the insulin causes a rapid oxidation of the introduced glucose, supplying energy so sorely needed. Since time is always an important factor in the treatment of shock, the tremendous advantage of insulin and glucose over glucose alone, can be seen. The physiological background of the action of insulin and glucose in shock is the same as in the nondiabetic acidoses or in the toxemic vomiting of pregnancy and eclampsia and I feel that independent clinical investigations will confirm these findings in the treatment of shock and the toxemia of pregnancy.

Gynecological and Obstetrical Conditions

Organotherapy has made a great advance in the treatment of gynecological and obstetrical conditions. In gynecology the organic extracts have been used in the following conditions: (1) Endocrine obesity; (2) uterine hemorrhage (menorrhagia); (3) amenorrhea; (4) dysmenorrhea; (5) sterility; (6) neuroses of the menopause (artificial or natural); (7) nutritional affections of the vulva and vagina associated with atrophy, pruritus, acne, and eruptions; (8) bladder and intestinal atony following operations.

The relation of the ovary to the other endocrine glands is interesting and we know definitely that a certain group stimulate the ovary while the other group act as depressors to the ovarian secretion. The stimulating group includes the thyroid, posterior pituitary, adrenal ovarian extract, and corpus luteum. The depressors include the anterior pituitary, thymus, mammary and placental extracts.

The endocrine syndrome is mostly polyglandular in character and therefore polyglandular therapy is usually indicated. It should likewise be remembered that the syndrome is due either to hyper- or hypo-function. It seems almost unnecessary to say that before administering any organic extract, the gland responsible for the symptoms should be determined, if possible, as well as the gland or glands associated with it, and a definite therapy planned from this knowledge. Strauss emphasizes the point that all endocrine-extracts therapy has a three-fold effect, namely, homo-stimulative, hetero-stimulative and substitutive; that is, the thyroid gland, for example, stimulates first the individual's thyroid activity, which is homo; second, it stimulates other endocrine glands associated with the thyroid, which is hetero, and third, when a cure of cretinism results from thyroid feeding, the therapy becomes substitutive.

In endocrine obesity the drug most commonly used is the thyroid extract, given in small doses and gradually increased. Nitrogenous foods should be taken during the administration of thyroid. It has been emphasized that the drug should never be given if there is any tendency to hyperactivity in the organ itself. If the obesity is a result of pituitary or ovarian insufficiency, or the result of an artificial or natural menopause, then the extracts of both these glands should be included.

If menopausal symptoms are due to genital atrophy, the anterior pituitary should be combined with the thyroid, and if marked ovarian hypofunction accompanies the obesity, the ovarian extract should also be added.

In hemorrhage: Post-partum hemorrhage is best controlled by pituitrin; menorrhagia and metrorrhagia, if

SISTER M. EUGENIA AND SISTER M. JEANNETTE, MARY IMMACULATE HOSPITAL, JAMAICA, L. I., N. Y. SISTER EUGENIA IS A MEMBER OF THE EXECUTIVE BOARD OF THE C. H. A.

uterine in origin, by posterior pituitary combined with suprarenal and thyroid and also mammary extract. If the bleeding is ovarian in origin, the thymus extract is given with good results.

In dysmenorrhea, if due to endocrine disturbance and associated with a moderate degree of genital atrophy, the administration of glandular extracts, especially corpus luteum, is followed with marked improvement, and the younger the patient, the better.

In sterility: One cannot hope to correct sterility by the simple employment of endocrine extracts, yet cases of conception have occurred after their use. Rubin's work on sterility, the method of inflation of the fallopian tubes with gas, is, so far, the most advanced. If it is impossible for the gas to pass, a solution of lipidol is injected into the uterus and an X-ray picture taken. If the obstruction of the tube is found at the uterine end, then the tubes are transplanted.

In the neuroses of the menopause, natural or artificial, the ovarian extract is made the basis of therapy. If evidence of thyroid or pituitary disturbance is found associated, then the extracts of these glands are added to the treatment.

In nutritional affections of the vulva and vagina, associated with atrophy, pruritus, acne, and erruptions, the employment of ovarian extract in moderate doses, especially in the young woman, following operation, has a good effect.

In bladder and intestinal atony following operations, pituitrin in one c.c. doses hypodermically repeated every hour for four doses, has proved of noted value. It should not be given if the tympanitis is associated with signs of peritoneal infection.

Ovarian grafting: It has been demonstrated that ovarian tissue may be transplanted into different parts of the body and that the transplanted tissue will obtain nourishment, live, and sometimes function. Experimentation has proved that autografts are more satisfactory than tissue taken from other individuals and it has been observed that in order for the grafted tissue to continue its function all the elements, including the interstitial cells, must be present. It seems that the retention of a part of the endometrum with the transplant, acts more favorably on menopausal symptoms.

The preparation of the graft consists in leaving the capsule in contact with the ovarian substance and several incisions made through the ovarian structure. This is spread out and transplanted, usually in the abdominal wall, just within the anterior-superior spine of the ilium between the muscle and peritoneum. This area has been found ideal owing to its easy accessibility and its nutritional qualities.

Obstetrical Conditons: Vomiting of Pregnancy, Eclampsia

In obstetrics, especially during labor, pituitrin is one of our most valuable drugs, when used intelligently. In vertex presentations with a normal pelvis and a baby of normal size, when the head is engaged, the os fully dilated, and a normal position of the presenting part and also when a test of labor is given to determine the amount of progress with each pain, then it is perfectly safe at this time to give five minums of pituitrin hypodermically. I have used this routine in a large number of cases and have found it most satisfactory.

The treatment of pernicious vomiting of pregnancy frequently calls for every resource at the physician's command. The inability on the part of some patients during the early months of pregnancy to retain food causes a starvation acidosis. Accepting this to be true, the elimination of the acidosis should cause the vomiting to cease. This has been accomplished by the administration of insulin, hypodermically, and glucose, intravenously. Probably the most important points to be stressed are, to administer the glucose intravenously, since rectal administration is uncertain and subcutaneous administration is apt to be painful. To the patient who is moderately dehydrated, give intravenously 1,000 c.c. of 10 per cent solution of glucose or, if severely dehydrated, give 2,000 c.c. of 5 per cent solution of glucose. This should be given very slowly. The glucose solution should be very carefully prepared from the highest purity glucose. One unit of insulin is given for every three grams of glucose. For one hundred grams of glucose, thirty units of insulin are given in divided doses, twenty units one hour after the beginning of intravenous infusion of glucose and ten units after the second hour. In addition to this, the patient is given carbohydrate fluids through a nasal tube. The milder cases of vomiting can be controlled by feeding a high percentage of sugar and the hypodermic administration of from one to two c.c. of corpus luteum daily.

In eclampsia also there appears to be an acidosis as the essential elements in the pathogenesis. The first consideration is given to the treatment of the acidosis. Insulin is reserved for the treatment of coma or semiconsciousness following a convulsion with a high blood sugar and a CO_2 combining power of 30 or below. Where facilities for determining blood sugar and CO_2 combining power are not available, clinical evidence of acidosis with a persistent coma or semiconsciousness following convulsions, warrants the use of insulin and a glucose solution of 5 to 10 per cent.

In conclusion, I wish to say that the next generation of physicians will be trained in the science of endocrinology and, with our system of medical examinations of our school children, I am quite sure that many of the endocrine disturbances will be detected in early childhood and with the intelligent use of organotherapy, many of them will be cured and the others, greatly improved.

THE SPIRIT OF THE OPERATING-ROOM STAFF

Sister Eugenia, Superior of Mary Immaculate Hospital, Jamaica, L. I., N. Y.

The surgeon, the Sister, the nurse crossing the threshold of the operating room each morning to his or her work, approaches great privileges and confronts grave responsibilities. Success means health to a sufferer. Failure means disease triumphant. The operating-room staff should be endowed with and conscious of, *a spirit of pride, a spirit of cooperation in the work, a spirit of compassion for the patient.*

Pride in our work does not mean self-glorification. The surgeon is an artist whose goal is health. There is no more beautiful or priceless material possession. Every operation performed represents an experiment in bacteriology.

We are poor witnesses of our own faults and bad judges of our own merits; we seldom recognize our shortcomings, but often magnify our virtues. Cooperation in the operating room means the assumption of authority by the surgeon and its recognition by his aids.

The spirit of compassion toward the patient in the operating room means sympathy for his misfortune, pity for his weakness, relief for his pain.

The responsibility and the fear of doing harm, which might be called the strain of practice, should impress us all. A poetic writer once said, "when we lay our hands on a human body we touch Heaven." Let us all be imbued with this holy fear, doctors, Sisters, and nurses, and we shall have cooperation in our operating room from the scrubbing of hands to the application of the last suture and dressing.

The Dietitian's Department

Conducted by Florence H. Smith, S.B., Department of Nutrition, St. Mary's Hospital, Rochester, Minn.
Suggestions and Correspondence Welcome.

THE USE OF STANDARD PORTIONS AS ILLUSTRATED BY FOOD MODELS IN THE TEACHING OF PATIENTS

Edna M. Klumb, Ph.B., Department of Nutrition, St. Mary's Hospital, Rochester, Minnesota

IN hospitals today educational work in the dietary department includes the teaching of patients as well as the instruction of student nurses and interns. We not only recognize the patient's need for medical and dietetic treatment while in the hospital, but also realize that the hospital has a sociological function to perform in helping him to readjust his mode of life and, in many cases, his program of eating. Thus the hospital is given the opportunity to become a center for teaching nutrition in the community.

As we assemble the patients from the hospital floors for instruction, we find that we have a group, representing varying grades of intelligence, education, and social background. Such a situation calls for much ingenuity and tact on the part of the instructor. She must interest them all, be able to visualize their home conditions and to make them feel that she is in real sympathy with the poor as well as the rich, with the dull as well as the intelligent. She must talk to them in a language which all may understand.

But, though this group of people may have widely different interests as far as occupation and recreation are concerned, when we discuss dietetics with them, we speak of an experience common to all, the need for proper food.

FIG. 1. STANDARD PORTIONS.

Carrot.	Tomato.
Pear.	Prunes.
Asparagus.	Potato.

We find also that to many of our patients food values and standard portions are new subjects. When we talk to them about a serving of meat or vegetable, each one naturally thinks of the portion as the amount served to him in his home or club. To one a serving of meat may mean a small filet steak, to another it may mean a large T-bone steak. This fact points to the need of an understanding between dietetian and patient as to just what is meant by a serving. We have learned to think of an inch or a quart as a definite unit, and so we can help the patient to visualize standard portions of food. In this hospital we have adopted standard portions of food as follows:

Standard Portions

100 gm. serving of vegetables—approximately 2 heaping tablespoonfuls.
100 gm. serving of fruit—approximately 2 heaping tablespoonfuls.
20 gm. serving of bread—1 slice.
10 gm. serving of butter—1 square.
20 gm. serving (dry wt.) of cereal—approximately ¾ cup.
20 gm. serving of bacon—approximately 2 strips.
50 gm. serving of meat—approximately 3"x2"x½".
200 gm. serving of soup—approximately 1 cup.
200 gm. serving of milk—approximately 1 glass.

Wax models representing these standard portions have been made for us by the Art Department of the Mayo Clinic. Fig. 1 represents the standard portions of fruit and vegetables.

These food models are painted in natural colors and are very realistic and attractive. They are being used constantly in the demonstration work and food lectures, and in the private instruction of patients. By their use

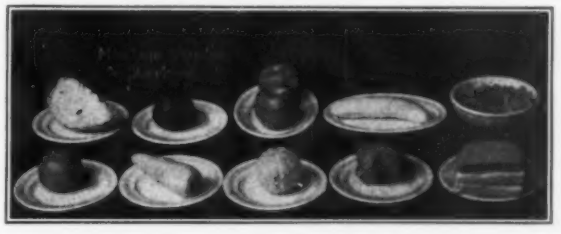


FIG. 2. FOUNDATION DIET.

Lettuce 100 gm.	Orange 100 gm.
Tomato 100 gm.	Banana 100 gm.
Beets 100 gm.	Potato 100 gm.
Carrot 100 gm.	Cereal 20 gm.
Apple 200 gm.	Bread 30 gm.

we are able to have permanent displays to which the patients have access at any time, an arrangement which was not practical when actual food was used for demonstration purposes.

When the patient learns to recognize the standard portions of food served we have found that the drudgery of teaching food values and diet calculation to each patient may be lightened if a simple plan of food selection is used. In planning both normal and special diets a foundation diet, made up of standard portions is used as a basis.

A Foundation Diet

4 servings (400 grams) of vegetables
4 servings (400 grams) of fruit
3 slices (20 grams) of bread
1 serving (20 grams) of cereal
1 serving (100 grams) of potato

If the food is selected as illustrated in Fig. 2, the composition is approximately as follows:

Carbohydrate	Protein	Fat	Calories	H_2O	Ca.
146	18	2	691	902	.378
Mg.	K.	Na.	P.	S.	Fe.
.246	3.087	.587	.587	.439	.009

FIG. 3. 6 GRAM PROTEIN SUBSTITUTES.

Almonds 30 gm.	Cream soup 200 gm.
English walnuts 37 gm.	Milk 200 gm.
Brazil nuts 36 gm.	Lean Meat 25 gm.
Filberts 40 gm.	Cheese 25 gm.
	Egg 1.

As meals are served in this hospital, the foods on the foundation diet are usually distributed as follows: One slice of bread for each meal; at breakfast a serving of cereal and a serving of fruit; at dinner two servings of cooked vegetables, a salad which may be either fruit or vegetable, and a serving of potato; at supper two servings of cooked vegetables, a salad, and fruit, either canned or fresh. The models representing these foods are on display in the lecture rooms, and during the course of the dietitian's lectures may be assembled on a tray or table. Thus the patient sees the actual building up of the foundation for the day's meals.

To this foundation diet are added foods to make up the individual's diet as prescribed by the physician. The amount of carbohydrate which the foundation diet contains will vary with the kinds of fruits and vegetables selected. When the calories prescribed are low, the leafy vegetables of low carbohydrate value may be used. Approximately 20 grams of protein are found in this foundation diet. The patient is taught to increase this to fill his diet prescription by the addition of foods from the group of standard portions of foods. In Fig. 3 each portion of food represents six grams of protein. The calories may be adjusted to hold the weight normal by the addition or subtraction of carbohydrate and fat.

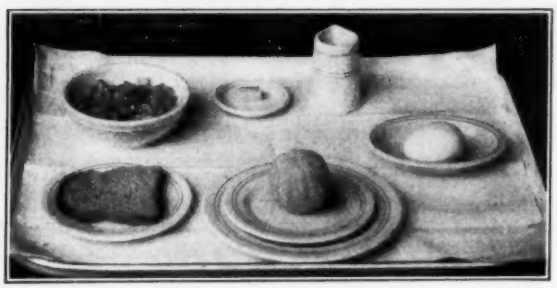


FIG. 4. BREAKFAST.

One orange (medium size).
One serving of cornflakes.
One egg.
One slice of toast.
One-half square of butter.
One-fourth glass of 20 per cent cream.

Figs. 4, 5, and 6, are of wax models representing a diet containing 40 grams of protein and 1,500 calories. By examining the meals represented by the models the patient is able to determine what foods are added to the foundation diet to fill this diet prescription. Such a diet probably represents the average basal requirements of the adult.

Diet Score Card[1]

1. The fuel value of the diet must be sufficient to maintain normal weight.

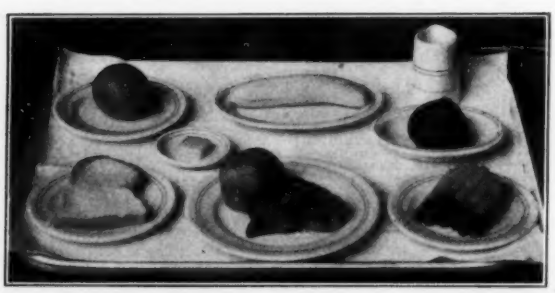


FIG. 5. DINNER.

One lamb chop.
One serving of potato.
One serving of tomato.
One serving of beets.
One asparagus salad.
One banana.
One slice of bread.
One square of butter.
One-eighth glass of 20 per cent cream.

[1]The Normal Diet, Including a Diet Score Card. Florence H. Smith, The American Jour. of Nursing, January, 1926.

2. The proteins of the diet must be adequate for growth.

3. A careful balance must be maintained between the food elements.

4. The residue or bulk of the diet must be sufficient to produce a normal bowel movement.

5. The mineral salts must be sufficient for body needs.

6. The diet must contain an abundant supply of vitamins.

7. The food served must be palatable, available, and suitable to the dietary habits of the individual.

Summary

The use of food models has been very helpful in simplifying the dietitian's work of teaching patients, and at the same time has been of value to the patient for whose benefit, after all, the dietetic department functions. The models help him to visualize the meals as they are planned and stimulate interest in arranging food combinations with regard to food value, flavor, and color.

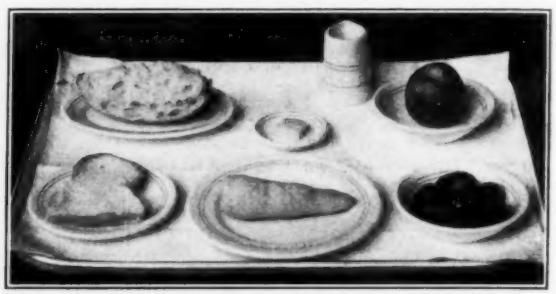
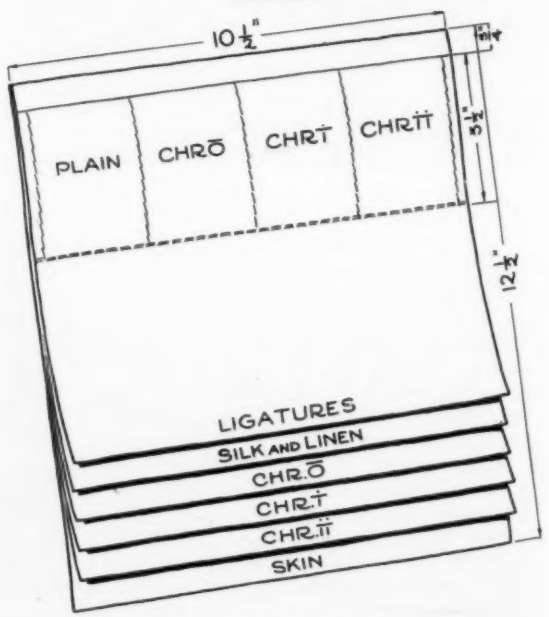


FIG. 6. SUPPER.

One serving of creamed carrots.
One lettuce and apple salad.
One serving of stewed prunes.
One slice of bread.
One square of butter.
One-eighth glass of 20 per cent cream.



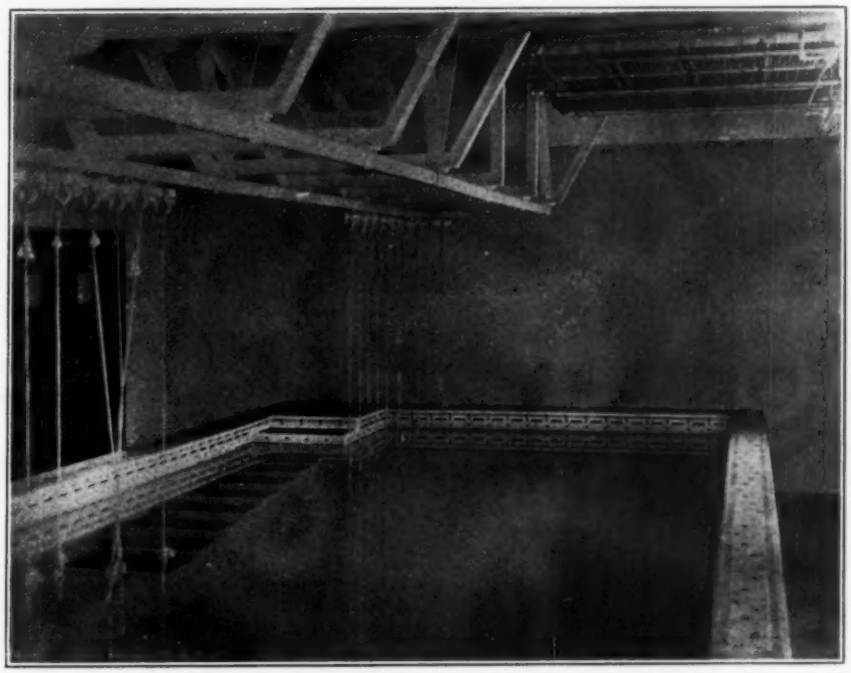
A SUTURE SET FOR OPERATING ROOMS.

Miss Anna Tarsa, R.N., operating room superintendent at Misericordia Hospital, Philadelphia, sends a sketch, reproduced here, of a suture set with kit and book combined. The nurses have found this outfit very helpful as no time is lost looking for sutures or ligatures. The kit is made of unbleached muslin, single thickness.

Swimming Pool for Infantile Paralysis

AT THE Brooklyn Home for Blind, Crippled, and Defective Children, located at Port Jefferson, Long Island, New York, the Sisters (Daughters of Wisdom) are doing some valuable work in transforming crippled children into normal children.

The photographs illustrate the method used at the home in restoring the power of locomotion to victims of infantile paralysis. Dr. Frank S. Child, surgeon in charge at the home, explains that for many years doctors have brought about cures of paralyzed children by exercising them in bath tubs. Several years ago, at the suggestion of Mr. Henry Pope of Chicago, whose child had been cured of infantile paralysis, the institution installed a large wooden tub, six feet in diameter. The tub would accommodate two children at once and it was found that the presence of another child stimulated the activity of both. The tub treatment proved so beneficial that with a $10,000 gift from Mr. Pope, a pool 28'x14' has been constructed.



POOL OR TANK USED IN TREATING VICTIMS OF INFANTILE PARALYSIS AT THE BROOKLYN HOME FOR BLIND, CRIPPLED, AND DEFECTIVE CHILDREN, PORT JEFFERSON, LONG ISLAND, N. Y.

The purpose of the swimming pool is for the muscle training of infantile paralysis cases. The buoyancy of the water makes possible the response of a muscle to a very slight stimulation so that muscles thought to have been totally paralyzed are found to be only incompletely paralyzed. However, these apparently paralyzed muscles have been dormant so long that the patient has lost the brain connection with the muscles. When the patient is first put into the water the Sister nurse guides the movement of the various muscles (muscle training). This gradually restores the coordination with the brain and the patient soon learns to stimulate the muscle himself (or move it). At this time there is so little power that muscle movement is possible only in water where the buoyancy removes much of the resistance due to weight. The continued exercise of the muscles in the water strengthens the muscles so that, in time, movement out of the water is possible. Once the patient has learned to move the muscles he is taught the motions of walking by the use of steps built in the pool.

The patients are kept in the water one-half hour and use the pool three times a week. Ninety patients are treated each week. The water is heated to a temperature of 95° to 100° F. Patients are suspended in water by over-head trolleys so arranged as to keep them properly immersed.

This treatment is only an incident among the varied activities of the Brooklyn Home at Port Jefferson and the St. Charles Hospital, Orthopedic Clinic at 277 Hicks St., Brooklyn. Through the work of the surgeons and the Daughters of Wisdom at these two institutions many deformed children have been made normal or nearly so. As the children often must undergo treatment for several years, the Sisters endeavor to make it pleasant for the little sufferers. Activities such as music, art, and lace-making occupy the children while they are not able to take part in the active games of children.

RIVAL PRACTITIONERS

["Why cannot a doctor in a certificate use language that even lawyers can understand?"—Judge Tobin.]

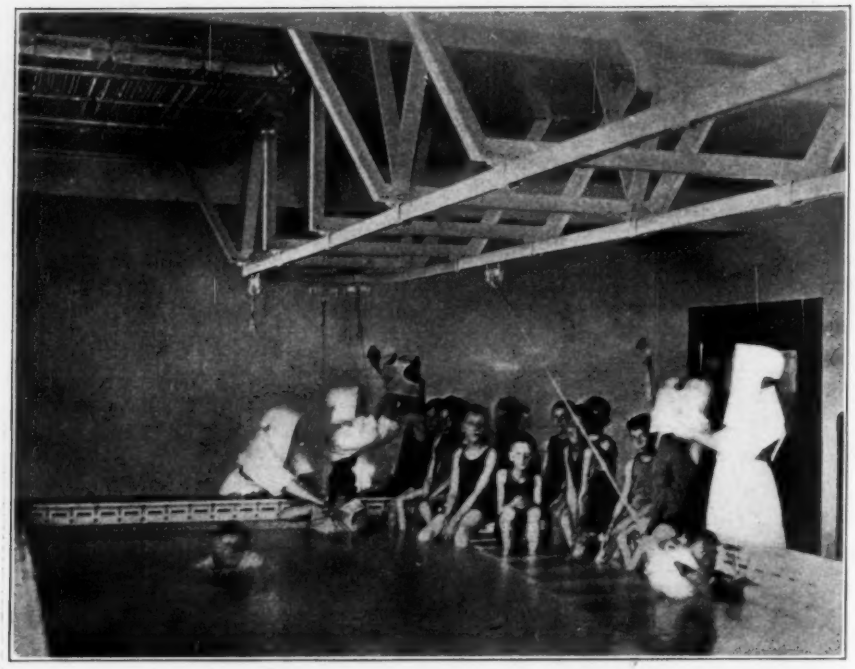
What awful folk these doctors are—
Their language gives one quite a jar!
Why can't they speak or write their views
In simple words like lawyers use?
Why can't the tiresome things supply us
With good clear terms like "nisi prius"?
Why don't they chatter, gay and airy,
In easy words like "certiorari"?
Or, like plain Englishmen, cajole
Lone females with the term "feme sole"?
If they have anything to say
They ought to say it straight away
In words that all can understand
Like "barratry" or "deodand";
Like "tort" and "feoff" and "gavelkind"—
Good words that show the simple mind;
Besprinkled, too, with phrases hearty
Such as "in re," "crim. con.," "ex parte."
Instead these wretched doctors sport
A jargon of the vilest sort,
Which much offends (as well it might)
Lawyers, who in plain speech delight.

* * * *

MORAL: This world still shows no lack
Of kettles calling saucepans black.

—LUCIO.

In "The Manchester Guardian."



MAKING USE OF THE POOL FOR RESTORING THE USE OF MUSCLES TO VICTIMS OF INFANTILE PARALYSIS AT THE BROOKLYN HOME FOR BLIND, CRIPPLED, AND DEFECTIVE CHILDREN AT PORT JEFFERSON, LONG ISLAND, N. Y.

WISCONSIN HOSPITAL ASSOCIATION CONVENTION
May 23-24, 1927

The Wisconsin Hospital Association will hold its annual convention in Milwaukee at the Pfister Hotel, May 23-24.

On the morning of the 23rd, after the opening address and officers' reports, Dr. J. C. Elson of the University of Wisconsin will present a paper on "Physical Therapy in a Hospital." This will be followed by a paper on "Hospital Administration," discussed from a hotel manager's point of view, and then by a "Round Table on Hospital Problems."

From 2 to 5 p.m. visits will be made to several Milwaukee hospitals. The Milwaukee Children's Hospital, 167 Seventeenth St., will demonstrate its heliotherapy and its dental departments and its system of infant feeding. The Evangelical Deaconess Hospital, Nineteenth St. and Wisconsin Ave., will show its maternity department and a special signal system enabling patients to call for special things. Mount Sinai Hospital, 246 Twelfth St., will explain its scheme of accounting, will show its occupational therapy department in operation, will show its laboratory, and demonstrate the color schemes for decorating rooms.

On the evening of the 23rd, there will be a paper on a phase of nursing by Miss Cornelia Van Kooy, R.N., president of the Wisconsin State Nurses' Association, and a paper on "The Social Service Aspect of the Hospital," by Mr. Aubrey W. Williams, general secretary of the Wisconsin Conference of Social Work.

The following papers will be presented on the morning of the 24th:

"How Shall We Collect Hospital Bills?" by Robt. R. Aurner, School of Commerce, Univ. of Wisconsin; "How to Reduce Costs of Hospital Service," by Mr. L. Austin, Supt., Mt. Sinai Hospital, Milwaukee; and a round table on hospital problems.

During the afternoon of the 24th, visits will be made to Columbia Hospital and Milwaukee Hospital. The former will explain or demonstrate the admitting of patients and the hostess reception system, the Bellevue filing and charting system, and, in the laboratory, the glucose apparatus for intravenous injections. The Milwaukee Hospital will show in particular its new nurses' home, power plant and laundry with water softener and ice machine, new kitchen, X-ray department, and maternity department.

At 6:30 p.m. on the 24th a banquet will be served at the Hotel Pfister. Rev. Wm. T. Dorward, D.D., will preside. The speakers will be: Hon. Judge A. C. Backus; Wm. H. Walsh, M.D., executive sec'y., American Hospital Association; Rev. C. B. Moulinier, S.J., president, Catholic Hospital Association; Miss Laura R. Logan, dean, Illinois Training School for Nurses.

Meeting of Indiana State League of Nursing Education. The Indiana State League of Nursing Education met at St. Mary's Mercy Hospital, Gary, Ind., on March 19. The business meeting was presided over by Miss Ethel Carlson, superintendent of nurses at the City Hospital, Indianapolis. Miss Carlson is the president of the organization.

The program after the business meeting included a paper on correlation of classroom and bedside teaching by Sister M. Florina, superintendent of nurses at St. Margaret's Hospital, Hammond. A discussion followed in which all members joined. Sister M. Flavia, superintendent of nurses at St. Mary's Mercy Hospital, with her students, demonstrated the teaching of drugs and solutions. The visitors then became the guests of Sister M. Alphonsine, superintendent of the hospital, who took them to visit the Lake County Tuberculosis Hospital near Crown Point. On returning to Gary, refreshments were served for the party at the Rothchild Inn. The out-of-town members attending were from Indianapolis, Fort Wayne, South Bend, Evansville, Hammond, Crawfordsville, and Terre Haute. The next regular meeting will be held at Indianapolis.

Nurse Enters Government Service. On April 1, Miss Marvel Stoller, a graduate nurse of Mercy Hospital School of Nursing, Janesville, Wis., went to Waukesha, where she entered government service at "Resthaven," the world-war veteran's sanitarium. Five years ago Miss Stoller came to Janesville from Frankfort, S. Dak. The graduate nurses of Mercy Hospital gave a farewell dinner in honor of Miss Stoller a few evenings before she left for Waukesha.

Plans for Addition Completed. Foeller & Schober, architects of Green Bay, have just completed the plans for the new $125,000 addition to the Sacred Heart Hospital, Eau Claire, Wis. This building will be strictly modern and thoroughly fireproof, and will contain 36 patients' rooms, each with private toilet and bath. The generosity of Mrs. Marie E. Dulaney, Eau Claire, has made possible this addition.